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essays in honor of Henry A. Millon

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Contents

5	Dedicatory Preface STANFORD ANDERSON
7	Editorial Foreword: The Necessity to Embrace IRIK A NAGINSKI
	Views and Descriptions
10	Leonardo Bufalini's Orthogonal <i>Roma</i> (1551) DAVID FRIEDMAN WITH PAUL SCHLAPOBERSKY
17	The 'Books of Houses' and their Architects: Surveying Property in Sixteenth-Century Rome CARLA KIYVANIAN
23	Unmasking Noto: The Baroque of Reconciliation LUCA SCARFI
30	Documenting Buildings in the <i>Waaf</i> System NASSER RABBAT
	Elements and Motifs
34	Pilaster Play MARK JARZOMBIEK
42	A Return to St. Peter's: The Life of a Fragment SARAH MCPHILL
47	Thoughts on the Ellipse: Borromini's Staircase for the Palazzo Barberini NOAH RESNICK
58	Ordering the Orders: Claude Perrault's <i>Ordonnance</i> and the Eastern Colonnade of the Louvre LUCIA ALLAIS
	Words and Works
76	Bernini's <i>Medusa</i> and the History of Art PATRICK HAUGHEY
87	Order and Things: Comenius's <i>Orbis Pictus</i> and Baroque Representation DEBORAH KULLY
100	Fictive and Real Architecture: A Preliminary Drawing for Andrea Pozzo's Vault Fresco at Sant'Ignazio, Rome KATHERINE WHEELER
107	A Renaissance Drawing at MIT GARY VAN ZANT AND RICHARD TUTTLE
	Origins and Influences
112	Reflections on the Ground Rules of the Baroque WERNER OLSCHLIN (TRANSLATED BY MARK JARZOMBIEK)
119	Benjamin's Baroque MICHAEL OSMAN
130	Frank Lloyd Wright and Michelangelo HILARY BAILLON
141	Why I Love Paul Hofer ALDO ROSSI (INTRODUCED BY MARK JARZOMBIEK AND TRANSLATED BY DAVID FRIEDMAN)
145	Plates
156	Illustration Credits
157	Contributors

Dedicatory Preface

Fifty years ago, Henry Armand Millon first served as an Instructor in the Department of Architecture at MIT. In 1960, he became an Assistant Professor, and in 1964 jumped two ranks to Associate Professor with tenure. I recall this last step, for I had just joined Hank as the department's "other architectural historian" in 1963.

When I joined the MIT faculty, it was immediately clear that the young and still relatively new Professor Millon held the profound trust and admiration of his colleagues—architects, artists, technologists, and humanists. Notable among them was Lawrence B. Anderson, Head of the Department. In 1964, in a period of increased attention to the humanities, MIT responded to the advocacy of Anderson and Millon in appointing MIT's first art historian, Wayne V. Andersen. Three years later the art historian Rosalind Krauss joined the group.

Hank became a full professor in 1970. In December 1972, he took the lead, along with Andersen, Krauss, and myself, in submitting a proposal for the first departmental Ph.D. program, titled History, Theory and Criticism of Art, Architecture and Urban Form. By the time the final proposal was accepted in 1974, Krauss had departed for Princeton and Hank was serving as the Director of the American Academy in Rome. In 1977, Hank returned to MIT until 1980, when he became the first Dean of the Center for Advanced Study in the Visual Arts at the National Gallery in Washington. While Hank brought his Center to international prominence, he remained committed to MIT. Almost without a break, Hank taught one HTC seminar each year, down to the present, leaving an indelible mark on generations of students and a long series of faculty colleagues. Over the years, HTC proved to be a leading doctoral program in architectural history—one that was internal to a department of architecture, and that, uniquely, incorporated art history.

These recitations neglect two of the most important facets of Hank's intellectual genius. His commitments are expansive. He was not only broadly admired within a greatly diverse MIT department, but he also brilliantly expanded that diversity. At the beginning of the 1970s, Hank's advocacy was central to the initiation of new fields, with the appointment of outstanding artists in photography and film: Minor White and Ricky Leacock.

Hank is a profound scholar. Viewed from our internal perspective, we have enjoyed fifty years in which Hank provided a model for the highest levels of academic performance, in research and teaching, while also being a congenial and supportive colleague of the greatest generosity. I can personally attest to the abiding support provided by Hank as mentor, colleague, and friend. His colleagues, both near and far, join in recognizing and honoring his many qualities through this special issue of the Department's journal *Thresholds* devoted to the Baroque—an issue to which the graduate students have contributed as a way to attest to Hank's continuing impact on their intellectual lives.

I close by expressing deep appreciation to Professors Erika Naginski and Mark Jarzombek who took the lead in honoring Hank through this project.

Stanford Anderson
Professor of History and Architecture
MIT
18 January 2005

Editorial Forward:

The Necessity to Embrace

ERIKA NAGINSKI

Descriptions of Baroque art and architecture often cannot help but fall back on a triumphalist vocabulary, and this is because superlatives and a language of the marvelous are no doubt necessary to describe the visual effects of, say, the vaults of the main hall of Filippo Juvarra's Royal Hunting Lodge at Stupinigi. That unrelenting bombast might inspire not only awe but also confusion is revealed by Alois Riegl, who, as Werner Oechslin reminds us in the essay he contributed to this volume, found the Baroque to be quite literally incomprehensible: "We do not understand," Riegl confesses in his *Die Entstehung der Barockkunst in Rom*, "the extraordinary quality that defines the Baroque, it is not convincing, it contains a contradiction, seems untrue; we therefore perceive it as miraculous."¹ A calmer, more even-handed approach sets the tone for the introductory pages written by Henry A. Millon for the catalogue of the recent blockbuster exhibition, *The Triumph of the Baroque*. Setting out to account for, on the one hand, the integration of all artistic media (painting, sculpture, ornament, and architecture), and, on the other, the sheer magnificence of the palaces, churches, and chapels created by that integration, Millon writes of the "necessity to embrace." The phrase is as succinct as it is suggestive. It describes the new urbanistic consciousness of architects who, as Millon explains, "envisioned buildings that were expansive and inclusive."² It also points to what might be understood as a contradiction in terms—the desire simultaneously to include *and* possess, to expand *and* contract, to incorporate *and* dominate.

The contradiction, which evokes artistic form as well as political power, surely lies at the heart of opinions on Baroque art and architecture—from the depravity reprimanded by Johann Joachim Winckelmann to the wildness detected by Jacob Burckhardt. Indeed, the urge to temper things architectural is already very much part of the debate, for example, when Nicolas Poussin explained in a letter to Paul Fréart de Chantelou, dated 21 September 1642, that one needed to refrain from "the confusion of ornaments . . . [which] were invented only to soften the severity of simple architecture."³ But if I land on Millon's phrase concerning the "necessity to embrace," it is not only to emphasize how well it serves as a description of Baroque culture more generally. It also addresses quite eloquently the reason for which these essays were gathered together to pay homage to his work as an historian of architecture. We have tried here to represent a diverse set of authors—from students to teachers, architects to scholars—just as we have tried to focus on the Baroque with essays on its beginnings and ends, its manifestation as theory and object, and its life as concept and work of art. In so doing, we hope to give Henry A. Millon some sense of our gratitude for his generosity and originality as teacher and interpreter of culture.

1. Alois Riegl, *Die Entstehung der Barockkunst in Rom* (Vienna, 1908), 3.

2. Henry A. Millon, ed., *The Triumph of the Baroque: Architecture on Europe 1600-1750* (New York: Rizzoli, 1999), 19.

3. Pierre de Colombier, ed., *Lettres de Poussin* (Paris: A la cité du livre, 1929), 98.



Views and Descriptions

Leonardo Bufalini's Orthogonal *Roma* (1551)

DAVID FRIEDMAN WITH PAUL SCHLAPOBERSKY

City plans based on the principles of geometric survey are an invention of the Renaissance.¹ Their first use was military and what they record is the defensive perimeters of sites. These were secret documents, closely held in the war offices of the state, and the audience that had access to them had skills not found in the general public. Foremost among these was the ability to read the specialized language of orthogonal plans.

Printed images of cities, by contrast, were calculated for wider circulation and from the early fifteenth century were largely pictorial. The most popular format was constructed from a vantage high above the city. Aside from the novelty of this imagined point of view, the visual language of the “bird’s eye” view, as it would later be called, was very familiar. The representation of three-dimensional objects in space—whether people or buildings—had been the foundation of Italian painting since the early fourteenth century. Pictorial images also had the advantage of flexibility. Because the bird’s eye perspective was not based on measurement, view makers could move landmarks and modify scale to compose images whose principal ambition was the expression of character. In so doing, they continued a tradition in the representation of cities that reaches back to Antiquity.

In this context, the appearance in print of the first orthogonal city plan, Leonardo Bufalini’s *Roma* of 1551, poses the difficult question of its purpose (Fig. 1, Pl. 3).² The plan is large—it measures approximately one and half by two meters—and is made of twelve woodblock sheets. Like the manuscript plans intended for office use by specialists, Bufalini’s *Roma* appears to support several practical applications. The first is military. Bufalini was one of the participants in the conference called by Paul III in 1534 to consider the refortification of Rome, and his map reflects this background in its careful representation of the city’s wall. The second is archaeological. The plan pays special attention to the ruins that were the city’s most distinctive attribute, and thus it is the first graphic image that attempted to coordinate information about the ancient monuments across the whole space of the modern city. The third is administrative. Because the plan registered the streets and blocks of the city’s physical fabric, it offered the possibility of cataloguing the ownership of property and coordinating the planning of new streets and squares. Perhaps it was Bufalini’s purpose in printing his plan to make the new tool available for all of these potential uses.

If so, he seems to have miscalculated. With the exception of military architects, contemporaries were not prepared to use images to rationalize knowledge of the city. Topographic information continued to be transmitted verbally and urban design was done on the site. Projects originating at the most sophisticated institutional and professional levels—the site drawings from the workshop of the papal architect Antonio da Sangallo and the picture books that catalogue the property of wealthy urban religious institutions (*Libri di Case*)—produced a few magnificent exceptions. But the daily record—as preserved in notarial books and the archives of government agencies—remained doggedly verbal throughout the century. The cadastral mapping of property is a phenomenon of the eighteenth century and the visual documentation of urban planning projects is a working method we



Figure 1. Leonardo Bufalini, *Roma* (1551), in the 1560 edition.

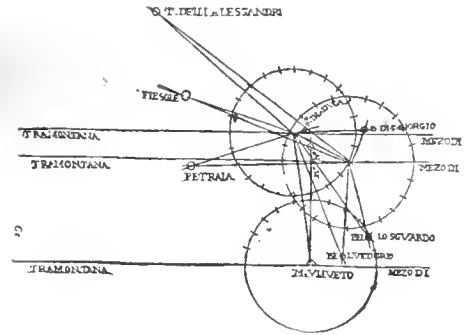


Figure 2. Cosimi Bartoli, *Del modo di misurare le distantie* (1564). Diagram illustrating triangulation of sites in and around Florence.



Figure 3. A comparison of Bufalini's plan with a modern survey of the city. In this comparison the Aurelian walls in Bufalini's survey have been made to coincide as closely as possible with those of the modern survey. The course of the wall in Bufalini's *Roma* is shown as a dashed line, the walls of the modern city as a solid line. The offset between the two is illustrated as a light grey tone. The dark bars show the offset between Bufalini's placement of the monuments and their location in the modern survey. (Paul Schlapobersky).



Figure 4. In this comparison, Bufalini's placement of the monuments near the Tiber, and the bed of the river, have been aligned as closely as possible with their placement in the modern survey. The greater offset between the course of Bufalini's wall (again shown with dashed lines) and that of the wall in the modern map (shown as a solid line) is illustrated by the greatly enlarged area of light grey tone. (Paul Schlapobersky).

see only in special projects beginning in the mid-seventeenth century.

Had sixteenth-century designers and administrators thought to use Bufalini's plan for their work, they would quickly have confronted its limitations. Survey technology was still in its infancy when Bufalini began his mapping project. Indeed, the process of urban mapping was such a novelty in the mid-sixteenth century that both laymen and design professionals volunteered to assist him in order to learn survey method. Although Bufalini's plan established a new standard of topographic specificity for the representation of the city, its faults are so serious as to put into question its usefulness for practical application.

In a seminar at the Massachusetts Institute of Technology, and then for the 2003 Nolli conference in Rome, the architect Paul Schlapobersky demonstrated Bufalini's successes and failures. What his analysis shows is that Bufalini was working with at least two separate survey systems. The most accurate was used for the city's wall and probably followed a system the sixteenth century called direct measurement. Here the surveyor worked his way around the defensive perimeter by measuring both the length and the bearing of each face of its polygonal circuit using a primitive theodolite called a *bussola*. The position of the monuments on the interior of the city, by contrast, would have been fixed by using the *bussola* to take the bearing of distant landmarks from several station points and coordinating the results by means of the triangulation system described by Gemma Frisius in 1533. Cosimo Bartoli illustrated the method with a survey of Florence and the surrounding hills in a publication of 1564, *Del modo di misurare le distantie* (Fig. 2). Bufalini does not seem to have integrated the two sets of results. It is possible to align either the city wall or the monuments as Bufalini mapped them with a modern survey. Both, however, will not fit simultaneously (Figs. 3, 4). A glance at any detail of Bufalini's map will show that the representation of the street system (and thus the properties between them) was not regulated by a systematic survey (Fig. 5). The orientation of some street sections—particularly the new, straight streets that pushed through the medieval urban fabric in the Renaissance—may have been measured with the *bussola*, but for the most part streets seem to have been interpolated freely between points fixed by the survey of monuments. Additional difficulties in using Bufalini's plan for technical purposes were created by the method of its mechanical reproduction. By dividing the master drawing into twelve woodcut blocks, the printing process created interruptions in the plan that cannot be repaired by even the most careful mounting. As a practical matter, the plan can be viewed as a whole only with one or two centimeter gaps between each of the sheets.

Despite its technical imperfections, Bufalini's plan might still have served antiquarians as an instrument for coordinating the great volume of evidence about the ancient city culled from classical authors, coins, inscriptions, ruins, and recent excavations. In fact, the closest models for Bufalini's orthogonal plan are Raphael's unrealized project to map the ancient city and the image illustrating the *Urbis Romae Topographia* of 1544 by the scholar of antiquity Bartolomeo Marliano.³ Bufalini was clearly interested in this aspect of his plan. He peppered it with marks and inscriptions identifying the ruins and the reputed sites of ancient monuments. Given the space and the slightest archeological justification, he also included elaborate plans of building complexes. But however conscientious, the mapmaker was not a scholar. The information about the ancient city presented in Bufalini's plan was often out of date or even willfully unconcerned with the evidence.⁴

Yet to focus on these inadequacies is to miss the point of Bufalini's image. We cannot judge a sixteenth-century technology by modern standards or describe it as an imperfect instrument for uses for which it may never have been intended. We are on firmer ground when we begin with this certainty: the simple fact that Bufalini's *Roma* was an image offered for sale to the public. It was a private publishing venture by a man considered to

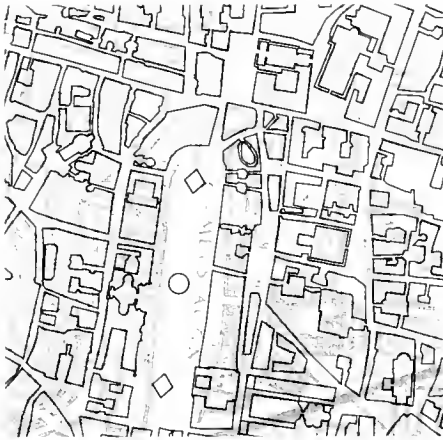


Figure 5. Detail of the section of Bufalini's Roma around the Piazza Navona overlaid with the block outlines from Giambattista Nolli's 1748 map of the same section of the city. (Paul Schlapobersky).

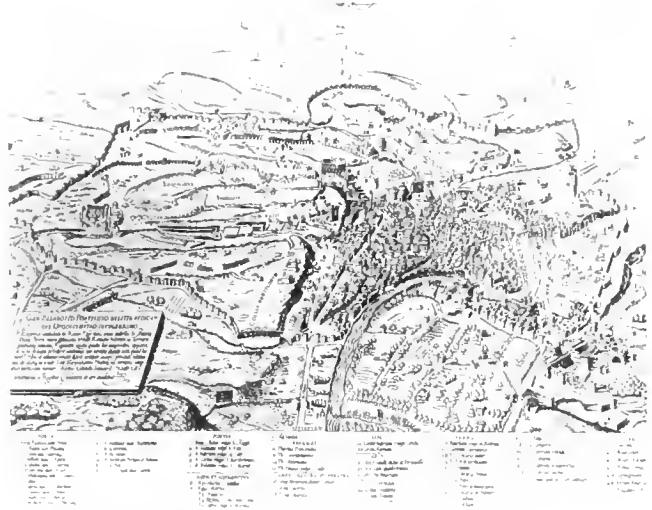


Figure 6. Giovanni Antonio Dosio, "bird's eye view of Rome," (1561).

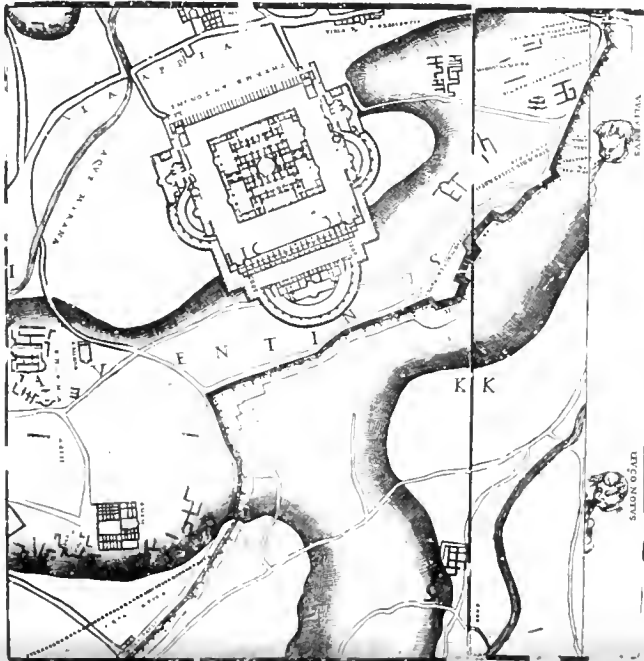


Figure 7. Detail, *Roma*. The Antonine baths, the city wall, a hill.

be a skilled surveyor. It entered a well-established market for urban images, and it is reasonable to assume that Bufalini imagined (incorrectly, as it turned out) that the novel form of representation he was uniquely prepared to offer could compete successfully there. As an image of the city—a representation of its character and identity as well as its form—rather than as an instrument of administration, investigation and transformation, the Bufalini plan had to satisfy two fundamental requirements. It needed planforms that were specific to the city of Rome and evocative of its very distinctive identity. At the same time, these planforms needed to be comprehensible to an audience that had never seen an orthogonal city plan. In other words, this first printed city plan had to do something equivalent to what the bird's eye views had been doing for almost a century—that is, conjure up a mental picture of the city—without compromising the spatial information that was the unique contribution of the new orthogonal format. To my mind, Bufalini succeeded at both of these tasks. Whatever its technical limitations, the plan is still the most accurate record of the city's space produced in the Renaissance. Surprisingly, it is also a powerfully expressive image. In order to appreciate this, it is helpful to look simultaneously at a contemporary bird's eye view. I illustrate Giovanni Antonio Dosio's view of Rome of 1561 (Fig. 6).

Bufalini's plan focuses on Rome's three most distinctive characteristics. The first is the natural topography of the site. The course of the Tiber and the form of the famous hills on which the city developed are essential to its identity. The river is the symbol of Rome's geographic position at the center of the Tiber valley. The hills identify the site of both the ancient and the modern city: Capitoline, Palatine, Aventine, Caelian, Esquiline, Viminal, and Quirinal in the order in which they are named in Francesco Albertini's 1510 guide.⁵ Both river and hills had been prominent features of the stylized images of the city produced in the late Middle Ages. Bufalini's *Roma* preserves the S-shaped riverbed familiar from these images yet obscured in Dosio's view, and captures the particularity of the river's kinked curves in a way that only survey could determine. It also gives the hills their traditional prominence but now, instead of the conventional sugarloaf shapes of the medieval plan-view, it renders the contours of each ridge and valley. Like the medieval images, Bufalini's *Roma* associates monuments with topographical features. But when both hills and the buildings on their surface are rendered in plan, the confusion of overlapping systems compromises the visual integrity of the composition. Whether this was troublesome to Bufalini we cannot know. There can be no question, however, that it was important to him to give the hills prominence. Equally certain is the fact that his Rome did so more powerfully and evocatively than any previous image.

The second marker of the city's identity is its wall. It is the most carefully surveyed aspect of the plan and the only structure whose definition is reinforced by the transcription of dimensions. This attention must reflect the government's concern for the defenses of the city; indeed, a survey of the walls was surely made by the pope's architects well before 1551 and may even have provided a basis for Bufalini's efforts, but this does not explain its prominence in a printed image of the city. What interest can the general public have had in the technical data of the military engineer? It is not as if the representation of Rome's defenses demonstrated the city's military strength. Quite the opposite. The much patched ancient structure was badly in need of modernization and any representation of its extended perimeter was an acknowledgement of the vulnerability of the site. However the wall was also a symbol, a structure that stood for both the physical city and the political one. Chroniclers praised the strength and beauty of its construction and enumerated its parts. According to the twelfth-century *Mirabilia*, the perimeter had 6,900 battlements, 361 towers, forty-nine castles, twelve gates and five posterns, and measured twenty-two miles in circumference.⁶ Both texts and images tried to describe the form of the wall but efforts to be concrete elicited wildly contradictory characterizations. Ludwig the Bavarian's commemorative medallion

of 1328 claimed a circular perimeter while Cola di Rienzo said the circuit of walls had the form of a recumbent lion.⁷ What is significant is that all of these topographers attempted to describe the city's perimeter in plan. The city wall had always had a shape as well as a structure but before 1551 these had to be imagined. The greatest achievement of Bufalini's plan was to offer its public a picture of Rome as a body with a shape that was infinitely more specific, and therefore more authoritative, than any seen before.

In the two-dimensional environment of orthogonal projection, there is no barrier between shapes that record forms of the world and those that respond to their own internal, formal logic. It is a commonplace of urban mapping that when knowledge, space, or patience fail, pattern (of blocks, of houses, of plantings) can substitute for survey. The effect is not always to degrade the informational content of the map. Pattern can create a ground from which the special object can emerge by virtue of its scale or form, or even by the specificity with which it is measured. Pattern plays a very important role in Bufalini's image of Rome. In this case, though, the pattern is meant to capture attention rather than deflect it. It is through pattern that Bufalini allows the third and most distinctive quality of his subject, the antiquities, to register in his portrait of the city (Fig. 7). All guides to Rome, even those of the Middle Ages, linger over the ruins. As the most compelling evidence of the city's former greatness and the repository of its classical history and early Christian mythology, the ancient monuments are a requirement of any picture of the city. Their appearance in Dosio's bird's eye view demonstrates the representational problem. How could these ruined structures, sometimes preserved as little more than foundations, be given a visual prominence equal to the one they enjoyed in the mental picture of the city? The Pantheon and the Colosseum might hold their own, but what of the hundreds of small, less well preserved sites? Dosio was forced to represent buildings in decay. Bufalini's orthogonal format offered better alternatives. One is the ease with which the orthogonal draughtsman can move from lines and forms to letters and words. Bufalini wrote copiously on his plan, naming spaces and buildings in contemporary use and identifying ancient buildings sometimes known only from literary sources. But the biggest opportunities came with the largest and best-known ancient buildings. Shown in plan, fully restored, they would have been the most familiar of all the orthogonal forms in Bufalini's *Roma* thanks to publications like Sebastiano Serlio's *Libro terzo delle antichità di Roma* of 1540 and Antonio Labacco's *Libro appartenente all'architettura* of 1552, which brought a range of building plans before a broad public. The bath complexes on the edge of the city offer the finest examples of Bufalini's practice. The representations, while not particularly accurate, are strikingly regular. They form a pattern that attracts the eye and, because the plans give no indication of the ruinous state of the buildings, they also imply structures that have a powerful presence in the city. These great ruins are the most prominent element in Bufalini's plan, and this is something that no pictorial representation of the same subject was ever able to achieve.

The distinctive characteristic of the orthogonal format is the way it reduces everything it treats to a two-dimensional system of graphic marks. In the Bufalini plan, the effect of flattening the natural topography, the city wall, the ancient monuments and the modern street system onto a single plane is to produce a timeless landscape in which the ancient and the modern city coexist on almost equal footing. The orthogonal forms take on a life of their own and Bufalini composes with them—within the constraints of his survey discipline—to construct his narrative. The story is a conventional one but the means of representation are his invention. The curves of the river, the course of the city wall, the rhythmic planforms of the ancient monuments, and the cross-hatched contours of the hills; these are the elements that read first when you look at the assembled plan. Interpretation, however, was neither Bufalini's primary interest nor the aspect of the work that he emphasized in the textual sections of the frame surrounding the plan where he is depicted as an engineer holding the tools of his profession. He

was not much of an artist either. His image suffers from a visual confusion that could have been resolved—as it was by Giambattista Nolli in his eighteenth-century orthogonal plans of the city—by better graphic design. But Bufalini seems to have been driven by the imperatives of the survey technology of which he was an early master. Orographic systems and street plans overlap uncomfortably in this pioneering work. They signal the limits of the author's artistic skill at the same time as they confirm his faith in the capacity of orthogonal forms not only to convey information but also to represent the many layers of tradition and history of the city of Rome.

1. The best history of the orthogonal plan in the Renaissance remains John Pinto, "Origins and Development of the Ichnographic City Plan," *Journal of the Society of Architectural Historians* XXXV (1976): 35-50. Mario Carpo has added a compelling interpretation of Leone Battista Alberti's theoretical writings about survey that are the starting points for this history in "Descriptio Urbis Romae: Ichnografia Geografica e cultura visuale all'alba della rivoluzione tipografica," *Albertiana* I (1998): 121-142. For the earliest monument of the new survey technology, Leonardo da Vinci's 1502 plan of Imola, see Mario Dozzi, "I rilievi di Leonardo da Vinci per la redazione della pianta di Imola," *Quaderni dell'Istituto di Storia dell'Architettura*, nuova serie, 1-10 (1983-1987), *Saggi in onore di Guglielmo de Angelis d'Ossat*, ed. Sandro Benedetti and Gaetano Mianelli Mariani (Rome: Multigrafica editrice, 1987), 181-186. A history of Renaissance urban survey based on the inventors' descriptions of the instruments developed for this work has been written by Daniela Strohholm, *La città misurata: Tecniche e strumenti di rilevamento nei trattati a stampa del Cinquecento* (Rome: Salerno editrice, 1999).

2. On the Bufalini plan, see Francesco Urle, *Roma al Tempo di Giulio III: La pianta di Roma di Leonardo Bufalini del 1551* (Rome: Danesi, 1911). Jessica Meyer is preparing a PhD dissertation on Bufalini for the Art History Department of Columbia University. She presented her preliminary assessment of the subject at *Giambattista Nolli, Imago Urbis, and Rome*, a conference held at the Studium Urbis Center, Rome (31 May–3 June 2003).

3. R. Bonelli, "Lettera a Leone X," in Arnaldo Bruschi et al., eds., *Scritti Rinascimentali di Architettura* (Milan: Edizioni il Polifilo, 1978), 459-484.

4. This is the conclusion of Ann Huppert in the paper "In What Sense a Map: 16th Century Documentation of Ancient Rome" presented at the Nolli conference (see note 2).

5. Francesco Albertini, *Opusculum de mirabilibus novae e veteris urbis romae* (Rome, 1510, Farnborough: Reprint Gregg International Publishers Limited, 1972), bk. 1, chap. 5.

6. *The Marvels of Rome (Mirabilia Urbis Romae)*, ed. and trans. Francis Morgan Nichols (New York: Italica Press, 1986), 4-5.

7. Wolfgang Braunfels, *Mittelalterliche Stadtbaukunst in der Toskana* (Berlin: Gebr. Mann, 1953), 49.

The “Books of Houses” and their Architects:

Surveying Property in Sixteenth-Century Rome

CARLA KEYVANIAN

Around the middle of the sixteenth century, landholding policies in Rome changed radically. Patrician families as well as religious and charitable institutions—the largest landholders in the city whose wealth had been generated by the agricultural production of their landed estates—started investing in urban property.

From the mid-fifteenth to the mid-sixteenth century, several factors combined to increase the desirability of urban as opposed to rural holdings. The principal factor was the political and urban unification of the city under papal rule. The medieval city was a patchwork of warring quarters dominated by separate patrician families. In 1420, when the popes transferred their seat back to Rome after the self-imposed exile in Avignon, they sought to regain control of the administration of the city. In order to loosen the hold of powerful families over the urban enclaves into which the city was fragmented, the popes cut streets through their strongholds and demolished the towers that fortified them. Porticoes and balconies, from which private militias could keep the papal army in check, were demolished; and narrow streets that could be blocked by barricades were widened. The city fiefdoms were thereby dismantled, and urban property became more readily available on the market.

The political and physical unification of the city led to the formation of areas of commercial and residential importance as well as a center and a periphery with divergent real estate value. High margins of profitability encouraged speculation and investment, especially in areas that had recently been (or were about to be) developed. Demographic factors also played a role. The famines that plagued the century struck hardest in the countryside, and pushed starving peasants into the cities. That and a declining death rate boosted the demand for housing, inflating rents. At the same time, the depletion of manpower in rural areas increased the cost of labor-intensive agricultural production, rendering it less profitable. Spiraling inflation, the lack of industries that could provide alternative investment opportunities, and the high demand for houses all contributed to making urban property an attractive investment.

Some patrician families weathered the storm, and accumulated substantial real estate. But the most aggressive protagonists of the new trend were religious and charitable organizations. These institutions rapidly transformed the moneys donated to them into urban holdings that they carefully administered for maximum profit. The practice of giving leases in perpetuity, which granted the use of a building to its tenant for life or up to the third generation of descendants, disappeared. While such customary contracts produced lasting bonds of loyalty to the quarter and its lord, they also yielded revenues that, under the pressure of inflation, were reduced to largely symbolic significance. Short-term contracts that allowed frequent adjustment to the cost of living replaced the old leases.¹ With the old system, tenants were responsible not only for rent but for necessary repairs; these were made cheaply, barely maintaining the building inhabitable.² When urban property became their main source of income, landlords started restoring their buildings on a regular basis.

The need for an accurate inventory of property that would ensure its efficient management prompted the system-

atization of architectural representation. In the second half of the sixteenth century, the production of texts that defined and standardized the methods and conventions of survey drawings peaked.³ One of the main practical applications of these surveying techniques was the *Libro di Case*, or Book of Houses. This was essentially a cadastre compiled by an institution, which included a surveyed plan (rarely the elevation) of each piece of property it owned. Such Books were produced by a new category of professional architects whose emergence was also connected to the shift in landholding policies. Here, I will offer some examples of the Books of Houses in order to describe their authors, professionals who specialized in the management of large urban estates.

The earliest surviving Book of Houses is thought to be the first in a series of three belonging to the confraternity of the SS.ma Annunziata. On the basis of the date appearing on one of the pages, it is believed to have been produced in 1563 (despite its inclusion of plans from circa 1563 to 1599).⁴ Two striking contemporary examples were also compiled for charitable institutions: S. Salvatore at the Lateran, a hospital for the poor; and SS.ma Trinità dei Pellegrini at Ponte Sisto, a shelter for pilgrims (Figs. 1, 2).⁵ The Book of S. Salvatore includes the plans of forty-three houses as well as eight more plans drawn in a different hand that were added after the cadastre was completed. In the Book of Trinità, forty-four houses are drafted. Two chapels—S. Andrea outside the Porta del Popolo and one outside Porta S. Paolo—are also included as income-producing properties since their alms-boxes yielded substantial revenues. The plans, which are finished in watercolor, are scaled and specify wall width and infrastructure (wells, fountains, chimneys, ovens, sewers, and brick display benches for shops). A long caption accompanies each plan, identifying the quarter and street, the owners of neighboring property, and the type of commercial activity (relevant information in the case of noisy or smelly businesses). The inscription also typically includes the estimated value of the property, the rent it produced, the names of the tenants, and the type of contract they held (Fig. 3).

The laborious process of taking accurate stock of the estate preceded the preparation of the cadastre. An archive had to be organized, often for the first time, in order to collect the deeds proving the institution's rights over their property. Each house was given an estimate and identified by a serial number, which was reported on the cadastre and affixed to the house itself (generally in addition to the coat of arms of the institution or the inscription asserting ownership).⁶ Finally, the building was surveyed and the resulting plan copied into the Book, together with other relevant information.

A team of people must have worked together to ensure the rapid compilation of a Book of Houses. The chief architect of the institution who directed their anonymous work also supervised the surveying and eventual restorations, formulated estimates, and advised on the buying or selling of property. More of a combination of surveyor and building contractor than innovative designer, these architects were especially prized for their knowledge of the market, their expertise in the management of labor, construction sites, and the supply of materials. One of these professionals was Orazio Torriani, the architect of the English hospice of St. Thomas, who drafted their Book of Houses in 1630 as well as the Book of the Collegio Germanico e Ungarico.⁷ Another architect with a solid reputation in the management of urban estates was Francesco Peparelli, who drafted the 1636 cadastre of the SS.ma Annunziata.⁸

Perhaps the most interesting among these professionals, however, is Giovanni Paolo Maggi, the author of the Books of both Trinità and S. Salvatore. Maggi was born in Como (the date of his birth is unknown) and died in Rome in 1613. He has perennially been confused with his contemporary namesake Giovanni Maggi, the designer of the Maggi-Maupin-Losi Map of Rome published in 1625.⁹ Franz Ehrle, in 1915, distinguished between



Figure 1. S. Salvatore at the Lateran. (Author).



Figure 2. SS. ma Trinità dei Pellegrini at Ponte Sisto. (Author).



Figure 3. SS. ma Trinità dei Pellegrini, Book of Houses of 1680.

ASA N° 7. posta nel Rione della Regola Contigua
al nro Oratorio Confina da ogni lato con i nri
Bent, e d'auanti la strada pub^a che vā à SS. Vin-
cenzo, & Anast^a Chiesa de' Chochi Qual Casa
hoggi ad uso d'Ostaria detta della Serena-
e fu uenduta alla nra Comp^a dal S^{to} Duca Gri-
rolamo Mattei la 20. Lug^o 1644. p^a Instr^o rog^o p^a
atti del Vespigni Not^o Capliño, al q^{te} &c, & in-
nro Inu^o Accar. s. Adi p^o Genn^o 1680 p^a 2500-
mita si valuta di Capitale p^a comodo, senza
preg^o &c sopra p^a 300- mita l'anno dall'Eredi
di Gio: Maria Paribelli pigg^a tiene caua al pre-
sent^e à ragg^o di p^a 4- p^a 100. E contiene il pian-
terreno, & il pian di sopra di Stanze n^o 14.
Cantine, & un' antrore grande à pian terre
no. ————— 2500 —

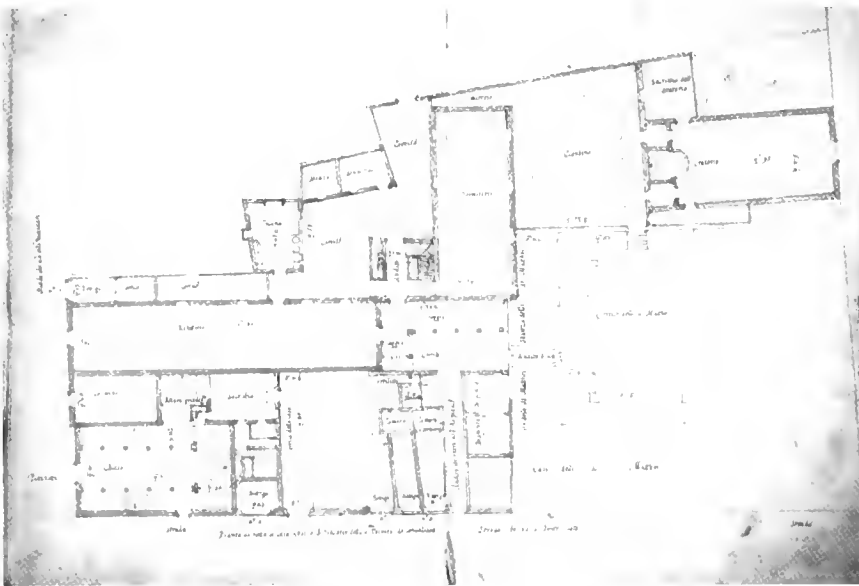


Figure 4. SS.ma Trinità dei Pellegrini, plan of the complex in 1597 Book of Houses.

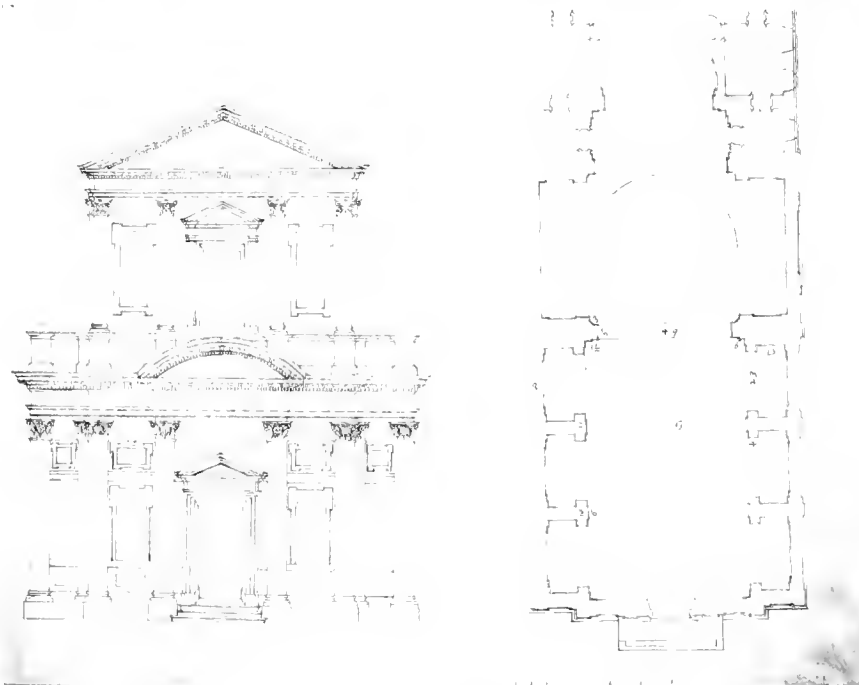


Figure 5. SS.ma Trinità dei Pellegrini, plan and elevation of the church in the 1597 Book of Houses

the two artists, and provided most of the information we now have on Giovanni Paolo. Although he remains largely obscure, the Maggi we are concerned with attained conspicuous positions in his time. He was appointed "Architetto dello Studio," chief architect of the University of Rome, by Gregory XIII, and was reconfirmed in the post by Paul V. When the latter decided to resume work at St. Peter's, Maggi submitted a plan for the Fabbrica di S. Pietro together with a report supporting Michelangelo's project against Carlo Maderno's. After the disastrous flood of Christmas of 1598, Maggi was among the architects summoned to examine the upper course of the Tiber (along with Maderno, Giacomo della Porta, Giovanni Fontana, and Ottaviano Mascherino). After another flood in January 1606, Maggi was consulted again, at which time he submitted a project for regulating the Tiber that he signed with Maderno. This kind of experience led to his appointment in 1610 as "Architetto del Tevere," architect in charge of the waterworks of the city—a job he held until his death when he was replaced by Maderno.¹⁰

For all his official positions and honors, none of Maggi's designs have seemingly survived. Yet I want to propose that we can safely attribute to him the design of the church of S. Trinità dei Pellegrini. Both contemporaneous and more recent accounts of the Trinità have attributed the church to Martino Longhi.¹¹ The error is in part justified by the lack of clarity about the fact that the Trinità initiated two distinct churches. Neither drawings nor appreciable physical traces survive of the first church, which was begun (but presumably never completed) in 1587 on Via de' Pettinari by Longhi, then the architect of Trinità.¹² When Longhi died in either 1591 or 1593, Maggi replaced him in this position, completing the Book of Trinità by 1597.

In 1603, the construction of a second, much larger church—the one still standing on Via Arenula—was begun. Maggi, I will argue, designed this church and supervised its construction. The Book of Houses of Trinità includes in its opening pages the survey of the main building of Trinità, a precious source for the reconstruction of the vast complex, which was almost entirely demolished in the 1940's (Fig. 4). On two opposed pages, Maggi drafted the plan and elevation of the church of S. Trinità in Arenula, one of the few surviving buildings (Fig. 5). The plan represents a single nave church with three rectangular chapels on each side. A narrow choir and an apse follow the domed crossing. The transept is aligned with the chapel walls. The drawing is labeled "Plan of the foundations that have been made for the new church." The elevation, an aedicule facade that closely resembles Giacomo della Porta's S. Maria ai Monti, is described as "Facade that is to be made for the church."¹³ Maggi's elevation was never realized; the ornamental facade we see today on Via Arenula was built in 1723 by Francesco de' Sanctis (Fig. 2). But the body of the church was built based on Maggi's drawing in the Book of Trinità.

By 1597, when Maggi signed the Book, the foundations of the church had been laid. Work must have been interrupted at that point, and would not resume until 1603 when the legacy bequeathed by a donor enabled the completion of the church.¹⁴ Immediately following the decision to build the church, Maggi was asked to prepare an estimate of the costs and a wooden model of the design.¹⁵ Until 1613, the year of his death, Maggi signed all the *misure e stime*, detailed estimates of completed work made to pay the master mason. Definitive proof that Maggi designed the church is found in a document dated 22 January 1604, which he wrote and signed. In the document, he claims to have designed the plan and elevation of the new church of the Trinità, and to have supervised its construction up to that point.¹⁶ The document was drawn up to renounce all claims to remuneration for his past and future work on the church as an act of piety. If, Maggi added, Trinità should decide to replace him with another architect, he reserved the right to claim his fee and to donate it to another charitable institution of his choice.

This last clause indicates how strongly Maggi wished to have the design of the church associated to his name.

He wrote the document nine years before his death. He was by then probably an aging architect who had held official posts but who could not claim another work of comparable significance as his own. Santa Trinità in Arenula was the large church of a powerful institution, erected at the crossroads of an ancient thoroughfare and one of the main points of entry into the city. Maggi proudly signed the frontispiece of the Book of Trinità "Magnifico M[essere] Giovan Paolo Maggi Architetto." But perhaps he feared he belonged to that category of architects that Lomazzo had stigmatized as "gente senza disegno"—people without designing skills who were more like stonecutters than men of genius. The design of the church of Trinità might have been the last chance the old architect felt he had for recognition as a truly "Magnifico Architetto."

1. Roberto Fregna, "Edilizia a Roma tra XVI e XVII secolo," *Controspazio* 5 (Nov. 1973), 58.

2. See Anna Maria Corbo, "I contratti di locazione e i restauri delle case a Roma nei primi anni del secolo XV," *Commentari* (1967): 340-41, and Fregna (as in n. 1). The authors draw their examples from contracts of S. Salvatore al Laterano and S. Maria della Consolazione respectively, but the clause on the obligation of the tenant to carry out necessary repairs was generally present in contracts drafted from the end of the fourteenth century to the beginning of the early sixteenth century.

3. One of the earliest books on surveying is Odoardo Fialetti, *Libro dei principi del disegno* (Venezia, 1614). See also Mario Docci and Diego Maestri, *Il Rilevamento architettonico: Storia, metodi e disegno* (Bari: Laterza, 1987), 112ff.

4. Deborah Nelson Wilde, *Housing and Urban Development in Sixteenth-Century Rome: The Properties of the Arciconfraternita della SS. ma Annunziata*, Ph.D. diss., Johns Hopkins University, 1989, vol. I, 17.

5. Archivio di Stato Roma (hereafter ASR), S. Salvatore al Laterano busta 385; S. Trinità dei Pellegrini (hereafter Trinità) busta 461.

6. In 1581, the Trinità decided to have a painter fresco their coat of arms and the appropriate cadastre number on each house they owned in preparation for the 1597 Book of Houses. ASR, Trinità busta 7, 30 Oct. 1581, 38.

7. The plan of the English hospice is published in Claudio Cristallini and Marco Noccioni, *I "Libri delle Case" di Roma: Il Catasto del Collegio Inglese (1630)* (Rome: Kappa, 1987), 9.

8. The frontispiece of the SS. ma Annunziata Book of Houses, signed by Peparelli, is published in Roberto Fregna, *La pietrificazione del denaro: Studi sulla proprietà urbana a Roma tra XVI e XVII secolo* (Bologna: Clueb, 1990), 101.

9. For examples of the confusion, see Angela Marino, "I «Libri delle case» di Roma. La città disegnata" in *Il disegno di architettura*, ed. by Luciano Patetta and Paolo Carpeggiani (Milano: Guarini, 1989), 151; and Annick Lemoine, "Le vicende costruttive della chiesa della SS. Trinità dei Pellegrini a Roma dal 1572 al 1690," *Bollettino d'Arte* 86.87 (1994), 117, who asserts that Giovanni Paolo Maggi is mentioned in the documents of Trinità starting in 1583. A "Giovanni Maggi" does appear, but the Maggi who is the author of the Book of Houses of Trinità is always referred to as "Gio. Paolo Maggi," or simply "Paolo Maggi." Nor could the Giovanni Maggi mentioned by Lemoine be the cartographer who was born in 1566 and would have been a teenager in the early 1580s.

10. Franz Lihle, *Roma al tempo di Urbano VIII: La pianta di Roma Maggi-Maupin-Losi del 1625* (Rome: Danesi, 1915), 8-10. See also Howard Hubbard, *Carlo Maderno and Roman Architecture 1580-1630* (London: A. Zwemmer, 1971), 235-36; and Tommaso Manfredi, "La presenza di architetti e maestranze ticinesi nel sistema dell'edilizia pubblica a Roma da Sisto V a Urbano VIII" in *Il giovane Borromini: Dagli esordi a San Carlo alle Quattro Fontane*, ed. by Manuela Kahn-Rossi and Marco Francioli (Milan: Skira, 1999), 215, 225.

11. Among contemporaries, only Filippo Titi ascribed the church to Maggi: "[La chiesa della Trinità] la rifecero in maggiore, e bella forma, e fu terminata nel 1614 con l'architettura di Paolo Maggi." See Filippo Titi, *Studio di pittura, scultura, et architettura, nelle chiese di Roma (1674-1763)*, ed. by Bruno Contardi and Serena Romano (Florence: Centro Di, 1987), vol. I, 64.

12. The first modern essay on the church of Trinità is: Sandra Vasco Rocca, "Alcune note sulla chiesa della SS. Trinità dei Pellegrini in Roma," *Storia dell'Arte* 38/40 (1980): 258-89. Vasco Rocca failed to realize that Trinità initiated two distinct churches. She suggests, 287, that the plan in the 1597 cadastre by Maggi is based on Longhi's ideas because "by that time the church must have been to a large extent built." See also by the same author, *SS. Trinità dei Pellegrini* (Rome: Palombi, 1979). The attribution to Longhi was adopted by the authors who wrote after her. See Lemoine (as in n. 10); and Carla Benocci, "Progetti e lavori seicenteschi per la chiesa della SS. Trinità dei Pellegrini in Roma," *Ricerche di Storia dell'Arte* 26 (1985): 106-12.

13. Except for the narrow bay placed between the crossing and the apse, the plan is also identical to that of S. Maria ai Monti begun in 1580. The original inscriptions read: "Pianta, over disegno dell'i fondamenti fatti della Chiesa nova" and "Facciata della chiesa da farsi." See ASR, Trinità (as in n. 5).

14. ASR, Trinità busta 18, 6 Mar. 1603, 5-5r.

15. ASR, Trinità busta 18, 11 Mar. 1603, 6r; and busta 62, unnumbered pages.

16. Maggi asserts that he has "datto (sic) e fatto, il disegno, pianta, et alzato, dela fabrica dela nova chiesa dela Sant. ma Trinita de Convalsienti e Pelegrini di Roma, et di già fondatone et muratone parte, ciouè governata in quello che haspetta alla profesion mia de l'architettura." See ASR, Trinità busta 463, folder *Restauri della Chiesa negli anni 1585 e nel 1603 fino al 1616*; sub-folder A 13. Vasco Rocca (as in n. 12) was the first to mention this document in 1980 although she still attributed the design of the church to Longhi.

Unmasking Noto:

The Baroque of Reconciliation

LUCA SCARFI

Impersonal forces do not transform human settlements. Or at least they do so only on rare occasions, and these are natural disasters: fire, flood, earthquake, and pestilence. Otherwise, the modification of settlement is a human act, however complex, accomplished for human motives, however obscure or ineffective.

—Kevin Lynch

On January 11, 1693, a violent earthquake hit the eastern coast of Sicily. The physical destructions of the region's urban centers precipitated the disintegration of the social, economic, and cultural structures they housed. The walled town of Noto was the most widely devastated.¹ A little over two centuries later, in 2002, UNESCO selected Noto along with seven other towns in the Val di Noto region for protection as "World Heritage Sites." As the UNESCO report specified, this "group of towns in south-eastern Sicily" met four criteria all of which were aesthetic in substance, and provided "outstanding testimony to the exuberant genius of late Baroque art and architecture."² The reasons underlying UNESCO's decision related in particular to the exceptional richness of late Baroque architectural detail found in Noto's ecclesiastical and secular buildings as well as to a unique urban configuration, which is inextricably linked to the architectural and natural surroundings. The process of selection was furthermore expedited in Noto's case because of the collapse of the dome and roof of the cathedral's central nave, which left the structure—a jewel of the Italian cultural patrimony—especially "endangered." The tragedy, which could and should have been avoided, was the result of technical, political, and organizational failures that occurred prior to UNESCO's selection, when the problems that led to the collapse were ignored and so took their own course.

UNESCO's claims about "exuberant genius" notwithstanding, not only is Noto more than an architectural icon but it is also erroneous to consider the Baroque in purely ornamental terms. Baroque buildings are as much manifestations of style as they are artifacts vitally connected to the political and religious powers of the period to which they belong. As the monographs by Paul Hofer and Stephen Tobriner have made clear, the reconstruction of Noto after 1693 exemplifies those vital connections.³ It is thus arguably more than a little reductive to consider the Baroque only as a stylistic invitation to illusion, as an ornamental approach expressing movement, fluidity and color. For the Baroque makes manifest the spiritual humanism that emerged in the seventeenth century and synthesized civilization and faith, making way for a new form of Christianity. In fact, the plan of the Baroque church reflects this new form of devotion; the typically oval plan promotes intimacy in a spiritual context, and, by extension, gives material shape to a theology focused on meditation and prayer.

By means of the *Congregatio de Propaganda Fide* founded in 1622 by Pope Gregory XV, spiritual humanism brought a new dimension to the Catholic mission to universalize its beliefs and to globalize its doctrines. The humanist aspect carried with it an evocation of optimism, elation, and delight.⁴ This was the kind of thinking that

influenced the Baroque style as it reappeared in Noto after the earthquake. The Baroque served as the ideal metaphor for a new kind of urban nucleus as well as for social structures put in place of those that had been destroyed. Noto stands out as a rare example of a city completely rebuilt according to a single, if complex, doctrine—and the ornamental mask of late Baroque aesthetics that it wears represents the theatricalization, through art and architecture, of that doctrine.

At the end of the seventeenth century, the Spanish Empire controlled Sicily by means of a court-appointed governor. To deal with the recent disaster, Spanish authorities selected Giuseppe Lanza, the Duke of Camastra, to oversee the reconstruction efforts. Instead of rebuilding Noto in its original site, Camastra chose an entirely different location some ten kilometers away on a hill called “dei Meti.” This decision was made in order to put the town in a better geographical location, one that was closer to the sea and to the network of roads that existed on the island.

Old Noto was a district with a medieval organization whose defensive walls, castle, and cathedral revealed a distinctly outmoded urban fabric—the kind of town that was considered obsolete by 1693, and not particularly functional. However, such retrograde architectural characteristics had helped to shape the patterns of everyday existence for centuries, and thus held enormous symbolic value for the earthquake survivors. Any radical change to the design and placement of the city necessarily meant an abrupt separation from the past way of life, and thus it was deeply traumatic for local residents to learn of the Spanish government’s decisions. Accordingly, while the new town was being built in the decade following the earthquake, the majority of the population refused to leave the old town of Noto.

Three principle groups participated in Noto’s reconstruction: first, the nobility, which controlled the agricultural economy; second, the Catholic Church, which ostensibly had no right to exert its influence but whose high-ranking members were fully integrated into the power structure; and finally, the peasantry, which had no real influence on the decision-making yet represented the social foundation upon which the region rested. Given the complex relationship between these groups, it would be entirely wrong to see Noto’s reconstruction—what Kevin Lynch has characterized more generally as a cumulative process of human intention—in terms of a linear series of events.⁵ Nor can the reconstruction be understood as a logical unfolding of cause and effect. The different factors at play, which do not allow for a straightforward historical description, require that we focus on the motivations and actions of each of the three aforementioned groups. At certain times, political decisions made outside of the local context influenced these groups, while at other times, local political conditions shaped their choices.

The Catholic Church assumed a central role in the more decisive phases of the project, both because it was a powerful civic presence and because it mediated between the rich and poor classes. Nearly one hundred years earlier, the Council of Trent had established the terms of a socially conscious role for ecclesiastical authorities, one that had increased the power of the monastic orders in order to exert greater control at the local level. The primary benefactors of this policy were the Jesuits. Their order, founded in 1540, had achieved unprecedented membership levels by the end of the seventeenth century.

In 1703, ten years after the earthquake, it was finally possible to see the urban reality of the Noto plan. During this period, several conflicts arose not only from within the noble sectors of society (who were competing for control of sites in which to build their family palaces), but also, more generally, between the landowning gentry and the peasant classes. In 1698, a referendum revealed that the majority of the population would have preferred

to remain in the old town of Noto rather than move to a new location (no matter how grandiose); the vote seemed to demonstrate that the local nobility still exerted its influence over the region. Furthermore, Camastra's ideal vision for the new town was focused on the nodal points (the churches and palace). It did not reflect real social life. He considered the plan from a traditional perspective, choosing to include only the institutions that the upper classes would deem important.

The Jesuit monk Angelo Italia, who devised the first solid iteration of the town's physical configuration, designed the plan for the new Noto. His was a longitudinal scheme that located the cathedral at the city center and thus made explicit the Jesuit concept of placing the main site of worship at the core of new settlements. The town grew in two areas over the Meti hill (Fig. 1). The first area was set close to the valley of the hill, while the second area was placed higher up on a plateau or *pianoro*. The area in the valley was regularized by means of an orthogonal axis running east to west, which was selected because it clearly regulated the relationship between the urban center and the landscape that surrounded it. Thus the new town developed on the basis of an entirely rational urban plan; the east-west corridor emerged as the most important street in the new town of Noto and served as the location for its two main public squares (Fig. 2). The first of these, the *Major ecclesiale*, was on tangent with the main street and was defined by the cathedral and the city hall (Fig. 3, Pl. 1). The second square, the *Area venalis*, housed the marketplace, and was completely bisected by the main street (Fig. 4).

While an orthogonal network of streets also characterized Noto's second new neighborhood, located on a plateau, it lacked coherence and hierarchy. Here the streets were all the same. The only point of suture between the first and the second neighborhoods was the cathedral. Located at an urban crossroads, it embodied the new visibility of the Catholic Church, which sought, both symbolically and literally, to be at the center of everyday lives. If Noto's early settlers lived, at least temporarily, near the Cathedral's construction site, this was because it was the only place that had water. On the one hand, the cathedral was initially regarded as a reaction against the Jesuitical unidirectional plan. On the other hand, the Cathedral's location placed psychological pressure on local residents because it attenuated the physical distance between the old and new Noto. This had real consequences for a newly uprooted social fabric and the economy on which it was traditionally based, for both were being compromised.

According to Max Weber, a city and its market forces are interdependent structures.⁶ That the links between the economy and the built environment that Weber described were severely disrupted in Noto explains in great part the reasons for which Camastra—who had chosen to impose his decision on the local populations rather than initiate a dialogue with them about the construction of a new city—was witnessing the initial failure of his policies. Camastra not only excluded commercial issues from the planning process but also social and economic ones. His plan also failed to provide any analogy or continuity between the old and new settlements, causing a complete upheaval of social life. Eventually, however, the population relocated to the new town of Noto, and adapted to a different urban environment because it was necessary to do so—leaving the old town a distant memory.

Unlike Camastra, the region's elite quickly realized the importance of maintaining a balance between the various social groups, for the economy had suffered enormous setbacks due to the lack of exchange. They recognized that it was critical to maintain exchange with the peasantry because what held the economic structure of their society together was the dynamic relationship between different classes. For instance, the role of metal-smiths and masons became particularly important, since these labor groups controlled and managed all construction projects. Thus a new set of class relations emerged, which was founded on knowledge and action.



Figure 1. Noto.



Figure 2. Piazza XVI Maggio



Figure 4. 1. Cathedral.
2. *Major ecclesiale* (Cathedral square).
3. City hall
4. *Area venalis* (Market square)

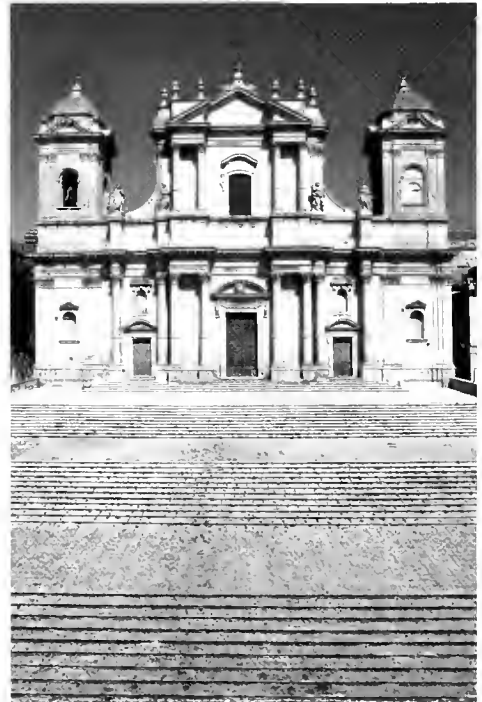


Figure 3. Cathedral, facade.



Figure 5. Sta. Schiara, plan and scheme.



Figure 6. Palazzo Villadorata, detail.



Figure 7. Cathedral in ruins.



Figure 8. Cathedral.

It seems clear that the plan for the new Noto was not simply an exercise in the rationalization of architecture that, in addition, put technical expertise on display. The plan also developed in response to a variety of events as well as to concrete economic, religious, and social issues. Between 1730 and 1750, for example, Noto's residents were deeply receptive to new economic theories and to aesthetic movements throughout Italy and Europe. The latter were made evident in the architectural points of reference that characterize many of the buildings. The façade of the cathedral, for instance, is directly related to that of Notre Dame de Versailles designed by the French architect Jules Hardouin-Mansart.⁷ The influence of Rome made itself felt as well; following the deaths of Gianlorenzo Bernini and Francesco Borromini, an affirmation of Baroque tendencies surfaced in the works of Filippo Raguzzini, Nicola Salvi, and Giuseppe Sardi. These were the Roman architects to whom several local architects turned for inspiration, at least indirectly.⁸ In Noto, for example, the architect Vincenzo Sinatra built the *Casa Senatoria* or city hall in 1742, which lines up along the vertical axis connecting the church of SS. Crocifisso and the cathedral, and majestically defines the quadrant of the central square opposite the cathedral façade.

The most significant local architect was Rosario Gagliardi on whom little information exists despite several buildings he designed. He was responsible for the church of SS. Crocifisso begun in 1715. Located in the plateau section, the church has a traditional plan with three naves and is on axis with the Cathedral—representing the only conceptual element brought over from the old Noto where a similar alignment occurred. Other important projects executed by Gagliardi are the church of S. Domenico, the church of Sta. Maria dell'Arco, and, finally, the church of S. Chiara (Fig. 5). Gagliardi's architectural legacy is reflected in several ways. First, there is the use of the centralized plan based on rectangular or ovoid spatial definitions (the favorite shapes of Bernini and Borromini). Second, there is a reliance on *chiaroscuro* to animate interior spatiality. Finally, there is the compositional quality of church facades, which combine the free-standing column with a central *campanile* (making for a characteristically Sicilian Baroque façade).

In the last phase of the construction of the new Noto, architects and craftsmen worked in concert to articulate the structural network of the streets, churches, and main buildings located at key nodal points. The final result was an exceptional and uniquely complete Baroque city proudly displaying the complex and exuberant detail of a sculptural ornamentation that the critic Cesare Brandi later famously described as a "stone garden." To walk through the city is to discover decorative figures whose expressive mythological countenances, like eccentric characters from a Fellini film, suggest an urban theatricality with allegorical overtones. They evoke Walter Benjamin's *The Origin of the German Tragic Drama*, and the idea that Baroque allegory is inherently equivocal, simultaneously representing both a thing and its opposite.⁹ One cannot help but wonder whether these sculpted faces are tragic masks, or whether they ironically mock their viewers (Fig. 6).

On December 13, 1990, another earthquake struck the same area of eastern Sicily. Although not nearly as devastating as the 1693 earthquake, it was strong enough to damage a number of buildings in Noto and elsewhere. Most significant was the clearly visible structural damage inside Noto's cathedral. Yet nothing was done to remedy the problems, and in March 1996, the dome and roof collapsed, leaving behind five meters of rubble (later found in a junkyard outside of the city). At present, a new dome is under construction (Figs. 7, 8). The question of whether or not this dome should be built according to the original design will be left for others to decide. Here, this architect is left to ask why nothing was done to avert the disaster in the first place.¹⁰

1. The extent of damage in the Val di Noto has been studied on the basis of archival documents by Lucia Triglia, "Il terremoto del 1693 nel Val di Noto. Il caso di Palazzolo Acreide," in Maria Luisa Madonna, Lucia Triglia, eds., *Barocco mediterraneo. Sicilia, Lecce, Sardegna, Spagna* (Rome: Istituto poligrafico e zecca dello stato, 1992), 147-176. A bibliography is provided by Mario Caruso, "Bibliografia generale sul terremoto del 1693 e sulla ricostruzione del Val di Noto," *Annali del barocco in Sicilia* 1 (1994): 109-119. See also the maps and plans for the reconstruction of Noto after 1693 gathered by Liliane Dutour, Henri Raymond, *Dalle baracche al barocco. La ricostruzione di Noto, il caso e la necessità* (Syracuse: A. Lombardi, 1990).
2. UNESCO, "World Heritage Committee: Decisions and Summary Record, 26th Session," June 24-29, 2002. The other towns included in UNESCO's report were Caltagirone, Militello Val di Catania, Catania, Modica, Palazzolo, Ragusa, and Scicli. See Lucia Triglia, *La valle del Barocco. Le città siciliane del Val di Noto "patrimonio dell'umanità"* (Catania: D. Sanfilippo, 2002).
3. See Paul Hofer, *Noto. Idealstadt und Stadtraum im sizilianischen 18. Jahrhundert* (Zürich: Institut für Geschichte und Architektur, 1996), and Stephen Tobriner, *La genesi di Noto. Una città siciliana del Settecento* (English ed. 1982, Bari: Dedalo, 1989). See also Cleofe Giovanni Canale with Pasquale La Spina and Lucia Cugno, *Noto. La struttura continua della città tardo-barocca, il potere di una società urbana nel Settecento* (Palermo: S.F. Flaccovio, 1976).
4. Olivier de la Brosse, "Lo spirito del barocco," *Le Message spirituel des artistes à Rome* (Rome: Centre Saint Louis de France, 1979).
5. Kevin Lynch, *A Theory of Good City Form* (Cambridge: MIT Press, 1981), 105-106.
6. Max Weber, *The City*, trans. by Don Martindale and Gertrud Neuwirth (1921, Glencoe: Free Press, 1958), 80-81.
7. Anthony Blunt, *Sicilian Baroque* (London: Weidenfeld & Nicolson, 1968), 26.
8. See especially Nancy Lockwood Adler, "Noto: Prelude and Coda to the Rebuilding of a City," *Kunsthistorisk tidskrift* LV 3 (1986), 122-135, who discusses the work of three architects involved in Noto's planning: Vincenzo Sinatra, Paolo Labisi and Rosario Gagliardi.
9. Walter Benjamin, *The Origin of German Tragic Drama*, trans. John Osborne (1928, New York: Verso, 1998), 174-177.
10. This is all the more surprising given the urban study of the Val di Noto carried out in the early 1980s, see Bernard Huet, "La ricostruzione del Val di Noto. Un paradigma di spazio urbano barocco," in Gigliola Nocera, ed., *Segno barocco. Testo e metafora di una civiltà* (Rome: Bulzoni, 1983), 13-25.

Documenting Buildings in the *Waqf* System

NASSER RABBAT

Buildings are a peculiar brand of cultural artifact. They are both time- and energy-consuming, and require complicated planning, financing, and a multitude of skills to build. Over time, they acquire multiple functions, meanings, and associations that may or may not conform to the intentions of their original builders. But they have one consistent physical trait: they are usually anchored in place (save for temporary exhibition pavilions and the like, which can be disassembled). To look at buildings, the viewer must either see them *in situ*, or rely on illustrations, descriptions, or representations. Thus, the documentation of buildings has always been essential to conveying architectural knowledge, and entails a continuous process of refinement and calibration as well as a careful decision about the modes of presentation that will best convey vital information.

Generally speaking, three modes of documentation exist: verbal, graphic, and representational. The first includes any language-based description of a building (whether oral or written). The second comprises all the graphic methods that aim at representing the various aspects of a building: these include plans, facades, cross-sections, and three-dimensional transcriptions, but not direct depiction. Such images usually involve some kind of codified depiction of a real or constituted spatial impression, one that requires specialized knowledge for applying the code on the part of the draftsman as well as the viewer. The third mode, which I term "representational," encompasses all the ways in which a building is represented as closely as possible to its actual appearance. These include all pictorial, perspectival, and photographic techniques from the simplest sketches to the most sophisticated photogrammetry, perspective-correcting photography, computer rendering systems, and, of course, modeling.

These three modes of architectural documentation occupy a historical continuum but do not succeed one another in chronological order. We do not know exactly when and where each appeared, but we suspect that some form of visual representation preceded verbal description as a means of documenting buildings at the dawn of history. At least this is what some cave paintings, with their putative depictions of tent structures, seem to suggest. The three modes have coexisted in certain places and traditions, as they do now all over the world. But this has not always been the case. They sometimes existed in pairs or alone only to disappear, to be replaced by another mode, and then to reappear at a later time.

The choice of one or another mode depends primarily, but not absolutely, on technical skills and technological advances. Culture also plays an important role in the choice, especially where the technical skills exist that will allow all three modes to be used. In these cases, the dominance of a certain mode can be seen as a reflection of a cultural preference or a cultural attitude (and by culture, I mean both architectural culture and culture in the broad sense). Some cultures have favored the visual over the verbal while others have opted for the verbal over the visual regardless of technological capacity. Those choices have always been a reflection of and operative in particular cultures.

In the Western tradition, for example, one might consider the drawings of a Borromini or a Bernini as a kind of apogee of the graphic expression of architecture whose visual power supersedes the need for any textual description. By contrast, medieval Islamic cultures in general developed a highly complex system for the verbal description of buildings, all the while eschewing the need for graphic representation. Verbal description was adopted in a wide range of written genres: geographical treatises (*masalik*), topographical tracts (*khitat*), travel and pilgrimage literature (*kutub al-ziyarat*), chancery and taxation manuals (*kutub al-kharaj*), and cartography (*surat al-ard*). These flourished in the Islamic world from around the ninth to the early sixteenth century; by 1530 images of the urban fabric began to appear at the Ottoman court.

The dependence on language manifests itself most clearly in the legal domain, where *waqf* or endowment deeds used verbal description—without any graphic representation whatsoever—as the exclusive means of documenting buildings for property and appraisal purposes. The institution of the *waqf* is an old and venerable Islamic legal-fiscal system for organizing charity, social services, and the management and inheritance of real estate and agricultural land.¹ *Waqf* is believed to have first appeared in the days of the Prophet Muhammad when he endowed a certain orchard for all Muslims, which implies that the term and the practice might be pre-Islamic. But this is impossible to verify given the sources at our disposal. By the medieval period, the *waqf* system had spread all over the Islamic world and beyond. It had also developed a language and a procedure for documenting buildings that satisfied contractual and legal requirements, that reflected an interest in the purely socioeconomic dimensions of architecture, and that formulated a specific vision of the role of buildings in urban space.²

A *waqf* deed is a written document that lists a series of properties to be endowed in perpetuity for a specific charitable or personal purpose. This includes the construction and maintenance of a religious or educational building, the support of a group of people devoted to a certain function or related to the *waqf* provider, and the provisions for fulfilling the needs of a particular institution.

Documenting a building in a *waqf* usually begins with a recording of its surroundings: the buildings, streets, and urban artifacts facing or abutting it in all directions. This sets the boundaries of the building and frames it within its urban context. Then comes the sequential description of the building's interior spaces as they are seen by a person walking through it. The description ordinarily begins with the entrance and then moves in a set direction in order to enumerate the various aspects and features of each space. In most cases, the description covers an entire level before moving to the upper levels. The author of the *waqf* typically pays more attention to circulation—focusing on windows, doors, and the specific functions of spatial zones—than to appearance. With the exception of listing particularly expensive building materials or indicating that a certain ornamental surface was made by employing a certain technique, physical and spatial qualities are not mentioned in the *waqf*.

Yet *waqf* authors were clearly engaged in documenting buildings. They brought to the verbal description of architecture a new level of sophistication in which even formulaic expressions carried specific connotations. The rhetorical subtlety of the *waqf* not only affected the value and desirability of the structure being described, but also captured in words what the culture in general deemed important in buildings. That is, they also revealed the architectural, urban, and, ultimately, sociocultural preferences and biases of the authors. In their eyes, the status of the building as a visible and static whole was much less important than its experiential quality or its functional capacity, two attributes that language can transmit with great power. A building, moreover, was never seen as a separate object; it could only make sense as a component in an urban context or in the landscape, probably a reflection of the prevalent forms of dense layout in the city. Otherwise, hardly any description of an

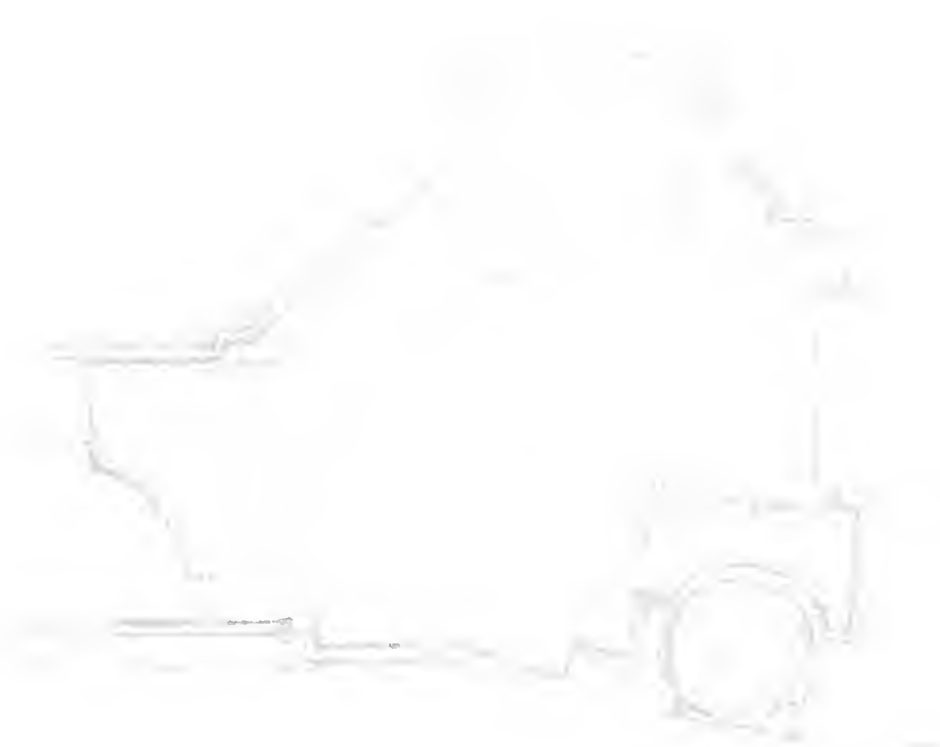
urban façade can be found in *waqf* documents. Only the location of entrances and the position of minarets were noted, emphasizing the link between the public space of the street and the building proper. Even interior spaces were seen in the context of their connectivity and functionality and never as an abstract arrangement of spaces or volumes. Their architectural characteristics were, in sum, never noted except as a means to indicate how they were accessed and whether or not they had built-in usable spaces such as recesses, niches, and alcoves.

One of the pressing questions here is whether cultural proclivity dictated the technique of documentation (i.e. verbal as opposed to graphic), or whether technical limitations imposed on a culture a given mode of documentation. The answer is far from settled, to be sure, and cannot be definitive. Yet Islamic cultures used graphic documentation in many other fields such as mathematics, pharmacology, botany, zoology, and even entertainment. That these cultures did not choose to use it in architectural documentation is therefore hardly the result of technical incapacity. My sense is that the choice had to do primarily with the division of labor in hierarchized medieval and early modern societies, where buildings and writing about buildings were the separate domains of two different social groups that did not easily communicate with each other. Builders belonged to modest social classes and building trades were relegated to the artisanal realm, with very little historical or intellectual interest shown in their pursuits.³ Describing buildings was left to the “men of the pen,” who belonged to the upper echelons of society and hardly acknowledged the builders or their language and means of representation. When they had to document buildings either for the *waqf* documents or in other documents, these “men of the pen” did so in their usual medium of expression, which was rhetorical rather than graphical (at which they had no reason to be skilled and with which they were traditionally unfamiliar). I suspect that it is only in places and times where builders were also speakers for and interpreters of buildings that we see the dominance of graphic over verbal modes of documentation.

1. For an introduction to the *waqf* system, see Miriam Hoexter, “Waqf Studies in the Twentieth Century: The State of the Art,” *Journal of the Economic and Social History of the Orient* 41/4 (Nov. 1998): 474-95; Murat Cizakea, *A History of Philanthropic Foundations: The Islamic World from the Seventh Century to the Present* (Istanbul: Bogazici University Press, 2000).

2. Many authors have developed ways of using *waqfs* as historical documents in the analysis of architecture. The pioneering scholar was ‘Abd al-Latif Ibrahim, “al-Wathā’iq li Khidmat al-Athar,” in *al-Mi‘tamar al-Tham li-l-Athar fi al-Bilad al-‘Arabiyya* (Cairo, 1958), 205-88. See also Michael Rogers, “Waqfiyyas and Waqf-Registers: New Primary Sources for Islamic Architecture,” *Kunst des Orients* 11 (1976-77): 182-96; Leonor Fernandes, “Notes on a New Source for the Study of Religious Architecture during the Mamluk Period: the Waqfiya,” *Al-Abhath* 33 (1985): 3-12; Randi Deguilhem and André Raymond, *Le Waqf dans l’espace islamique: Outil de pouvoir socio-politique* (Damas: Institut Français de Damas, 1995); Richard van Leeuwen, *Waqfs and Urban Structures: The Case of Ottoman Damascus* (Leiden, Boston: Brill, 1999). One of the best studies of the architectural particularities of *waqf* formulae and terminology is Hazem Sayed, “The Rab’ in Cairo: A Window on Mamluk Architecture and Urbanism,” Ph.D. diss., Massachusetts Institute of Technology, 1987.

3. For a discussion of the status of artists and builders in Mamluk society in particular, see Nasser Rahbat, “Architects and Artists in Mamluk Society: The Perspective of the Sources,” *Journal of Architectural Education* 52/1 (Sept. 1998): 30-37.



Elements and Motifs

Pilaster Play

MARK JARZOMBEK

In 1492, when Bramante designed his extension of Santa Maria delle Grazie, he also designed the pier that linked his work with the preexisting medieval nave. It was an unprecedented piece of architectural wizardry composed entirely of panel-like pilasters standing shoulder to shoulder with no trace of the pier onto which they are applied. To move around the pier is to notice that one pilaster has neither base nor capital, that one has a sort of capital composed of layers of molding strips but no base, that one has both a capital and a base, and that one is in essence upside down with the molding strips at its base (Fig. 1, Pl. 5).

It is difficult to properly assess this piece of architecture. In truth, it could easily be dismissed as mere marginalia were it not for the fact that the pilaster as a design problem was so obviously intriguing to Bramante—much more so than to Brunelleschi whose use of the pilaster was decidedly more conservative. At Santa Maria delle Grazie, the pilasters cannot possibly be read as quasi-structural. They are instead the surfacing theme of the entire building.¹ And even where Bramante is at his most classical, as in the Tempietto di San Pietro in Montorio, at the level of the drum he offers a row of panel-like pilasters without capitals (Fig. 2). I use the word “panel-like” to emphasize the dual semantic role that this architectural element fulfills, as pilaster and as frame, in other words, as something solid albeit thin, and as something almost immaterial, a mere frame against the wall.

At Santa Maria presso San Satiro, in the Capella della Pietà, Bramante plays even more ingeniously with the panel pilaster theme (Fig. 3).² The geometry of the octagonal chapel is defined by splayed panel pilasters, the idea for which came from Brunelleschi’s octagonal oculus of the dome of Santa Maria del Fiore, the splayed pilasters there being most probably the first such example in the history of architecture (Fig. 4). Bramante, however, destroys the residual structural reading of Brunelleschi’s pilasters, which are of the Corinthian order, not only by using panel pilasters, but also by integrating their surfaces into the overall ornamental strategy of the interior. To make things more complicated, at the upper ambulatory level, the piers separating the two arches are pilaster-cornice hybrids that support stubby panel pilasters. These likewise read as support brackets for the entablature above. When all these features are taken together, it is clear that Bramante deliberately sought to blur the identities of frames, pilasters, dados, and brackets and yet still work within the principles of the classical system.

It would be wrong to argue that Bramante was engaged here in a self-conscious play on the architectural elements of classical language even though there is something nonetheless “at play,” so to speak, in his architecture. What he discovered was that pilasters can be embedded in traditional notions of a columnar order—living up to the expectations of proportion and scale—while at the same time existing at the margins of the permissible. In other words, although some pilasters must serve their columnar masters, others can exist in a more fluid state of definition.

The piers that define the octagon of the Cathedral of Pavia (begun 1488 and designed, scholars agree, with considerable input from Bramante) are another example of this phenomenon (Fig. 5). Here, the architect surfaced the

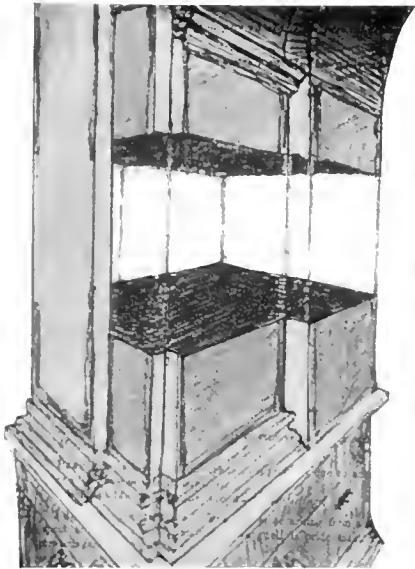


Figure 1. Sketch of a detail from Santa Maria delle Grazie, Milan (1466-1490, partially rebuilt by Bramante, 1492-99). (Author).



Figure 2. Bramante, Upper level of the Tempietto of San Pietro in Montorio, Rome (1499-1502).



Figure 3. Bramante, False ambulatory level of the Capella della Pietà, Santa Maria presso San Satiro, (finished c. 1483).

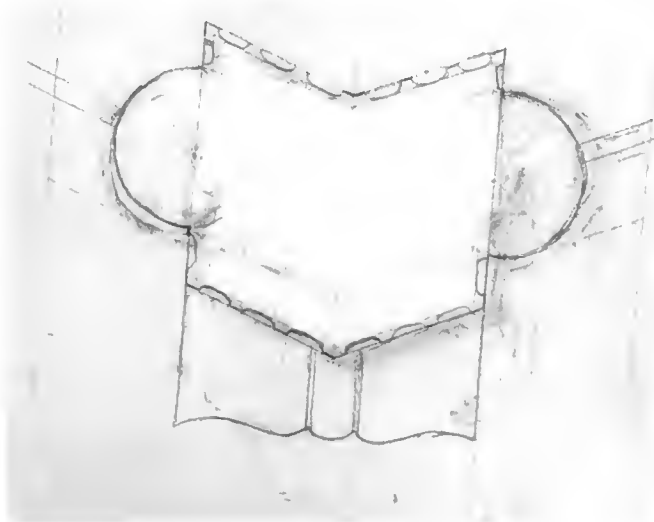


Figure 4. Sketch of a detail from Brunelleschi's Lantern of Santa Maria del Fiore (completed 1472). (Author).



Figure 5. Interior, Cathedral of Pavia (begun 1488).

entire mass with panel pilasters, with the splayed central pilaster as the only element that runs the entire height into the drum. But the most remarkable part of the design is the upper register, which is divided into two equal zones consisting of pilasters, again without capitals, separated by an entablature band that seems to have slid down from the cornice above it. The lower pilaster bundle thus serves as a type of socle for the upper one while the upper one serves as a “bracket” for the entablature.

The background to this is certainly more medieval than classical. The principle of a splayed pilaster, for example, has its ancestry in the piers in the Baptistry of Pisa, the oculus piers of the Baptistry of Piacenza or those visible on the exterior of the choir of Santi Giovanni e Paolo in Venice (Fig. 6). Where the pilaster stubs at the attic level are concerned, their principal classical precedents are to be found at the Arch of Constantine and the Arch of Septimius Severus (Fig. 7). Yet the relationship of pilaster stub above and the principal order below was never particularly complex in the architecture of ancient Rome, and was certainly nothing like the pilasters from the Baptistry of Pisa (Fig. 8). There, pilasters without capitals are embedded in the surface decoration of the wall and define a type of mezzanine zone above the level of the primary order. These pilasters lead to pilaster clusters at the ambulatory level, which, in turn, support pilaster stubs underneath the string molding at the base of the dome. Of similar importance is the pilaster sequence on the façade of San Francesco in Prato or that on the exterior of the lantern of the Pistoia Baptistry, where pilaster stubs link the top of the columns with the entablature (Fig. 9).

It is not accidental that, on the subject of pilasters, the classical revival of the Renaissance integrated itself with the classical survival of the Middle Ages, given that the triphorim, the ambulatory, and the attic space were such important elements of the medieval spatial thinking. Stub pilasters, panel pilasters and wall panels, like those at San Miniato, helped to solve the problem of an integrated elevation in the northern Italian architectural tradition. Though Brunelleschi disdained the pilaster stub and the aesthetic of paneling in his architecture, Bramante and other architects obviously preserved these devices, thus allowing for more complex spatial structures than were possible in the Brunelleschian model. The screen between the apse and ambulatory of Antonio di Marco Gambello's San Zaccaria in Venice, begun in 1458, shows this particularly well, as does Antonio da Sangallo the Younger's design for the façade of San Pietro, which included a whole row of attenuated pilaster stubs (Fig. 10). Jacopo Sansovino's funerary monument for Ascanio Sforza in Santa Maria del Popolo in Rome (1505) also contains many such features. At his Loggetta of San Marco, Sansovino used pilaster stubs to orchestrate an entire attic-frieze zone that was completed in 1540—six years before Michelangelo began his work on San Pietro, where the theme was developed even further. Giuliano da Sangallo also maintained the tradition at Santa Maria delle Carceri, commissioned in 1485, where his pilasters are set against the darker hued stone of the frame-paneling, a device that Michelangelo was to develop at the Conservator's Palace in Rome (Fig. 11). Finally, one must not forget Giulio Romano's often ignored Palazzo Ciciaporci (1521), where flat panel pilasters mark off the rhythm of the bays at the *piano nobile* and, on the floor above, narrow framed panels floating on the surface of the wall are meant to double as “pilasters.”

Michelangelo, more than any other architect of the time, brilliantly extended the slippages between “ambulatory” zone panels, socles, pilasters, dados and brackets that marked advanced architectural thinking of the time. The final stages of the façade for San Lorenzo (1516-20), for example, show a quasi mezzanine zone between with the bays marked off by pilaster stubs (Fig. 12). Though often explained away as a necessary staging for the sculptural ornamentation of the façade, the solution, as remarkable as it is awkward, derived directly from Antonio da

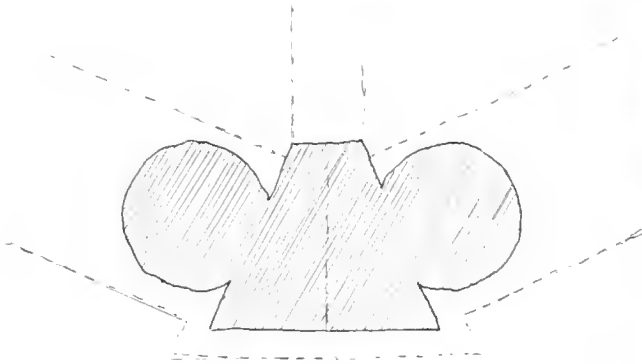


Figure 6. Sketch of the pier of the Lantern of Piacenza Baptistery.
(Author)



Figure 7. Arch of Septimius Severus, Rome (203 CE).



Figure 8. Interior of the Baptistery of Pisa, (1063-1390s).



Figure 9. Exterior of the Lantern from the Pistoia Baptistery, (finished 1359).



Figure 10. Antonio da Sangallo the Younger, Model of San Pietro (1548).



Figure 11. Giuliano da Sangallo, Santa Maria delle Carceri, Prato (begun 1485).

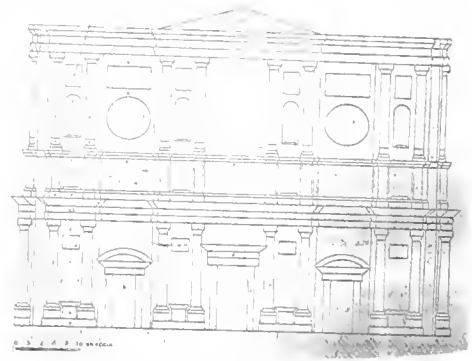


Figure 12. Façade project for San Lorenzo, Florence (1516-20).



Figure 13. Right-hand window of Porta Pia.

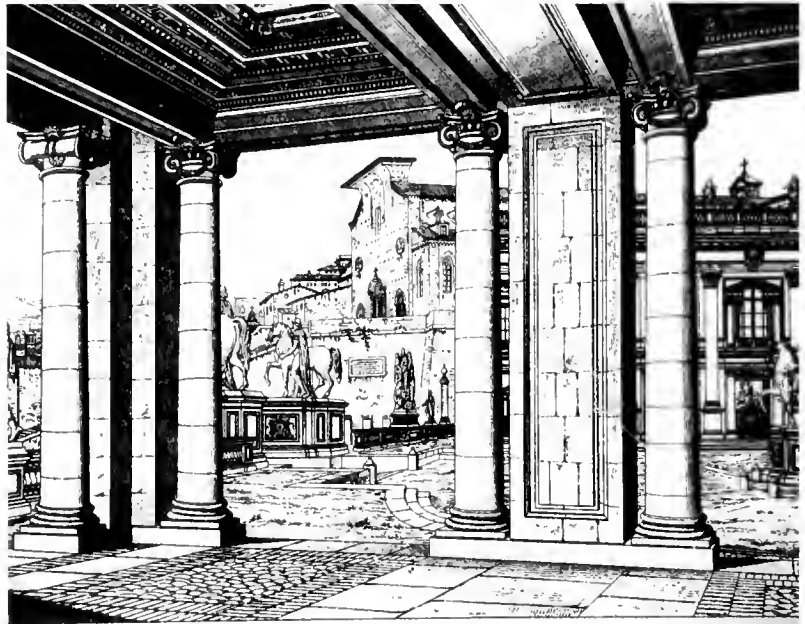


Figure 14. Drawing of Michelangelo's Colonnade of Conservator's Palace, Rome (designed ca. 1540) in Paul Latrouilly, *Édifices de Rome moderne* (Paris: Bance, 1860), pl. 353.

Sangallo the Younger's design for the façade of San Pietro, which Michelangelo purportedly otherwise disliked but here pushed to the limits of classical protocol. The breaking apart of the upper and lower halves of the façade was rarely ever used subsequently.

Michelangelo would explore the amorphous nature of architectural semantics throughout his architectural career, becoming particularly attracted to the design of doors and windows where the play on the theme of pilaster, panel and framing could be exercised without disturbing the more official requirements imposed by the architecture of grand orders. Particularly brilliant is a window design for the Porta Pia (1562), which is based on his obvious study of the courtyard of Bramante's Palazzina di Innocenzo VIII (Fig. 13). A broken pediment rests on corbel-pilaster hybrids that, in turn, sit on small tight-fisted corbels serving as capitals for a pilaster-like element. The base at the bottom, sitting on the broad shoulders of a scroll, can be read as the base either for the whole or for the rear most layer. On the interior, and framing the window opening itself, is a remarkable U-shaped pilaster with no base yet with two square blocks serving as "capitals" that hold the central block with its raised central panel.

In studying Michelangelo's designs, one might at first be inclined to agree with those scholars who point to their ostensibly sculptural character.³ Giulio Carlo Argan, for example, claims that Michelangelo's architecture, like his sculpture, possesses an "architectonic" based on "the not-finished."⁴ But those arguments imply that it was Michelangelo's sculptural talent—in combination, perhaps, with a psychological predilection to avoid "firm opposition" as Argan has phrased it—that motivated him to experiment with architectural form.⁵ Be that as it may, we have to be careful not to demote what Michelangelo learned from Bramante, Giuliano da Sangallo and Sansovino. Nor should one obfuscate the clarity and precision needed to create a successful play of the architectural semantic. And finally one should note that Michelangelo was able to solve the Sangallo problem that beset him in his design for the façade of San Lorenzo by creating a distinction between primary and secondary pilaster usages: the former followed the rules of proportion whereas the latter, though reserved for features like windows and attic storeys, was actually, for Michelangelo, the greater design problem. This is seen at the Conservator's Palace (designed around 1540) where the main façade, though not without its pilastrie ambiguities, contrasts markedly with the back wall of the colonnade. There one finds wide panel pilasters that seem to be neither fully structural nor fully pilastrie (Fig. 14).

Among the later masters of pilastrie virtuosity was Francesco Borromini. Let me turn to the pier to the left of the entrance of the Oratory dei Fillipini (1637-52). Here, Borromini experimented with a range of pilaster types, the most important being the splayed pilaster (Fig. 15, Pl. 6). He also used pilaster voids that hold both real and invisible columns. One has to imagine the presence of non-structural elements. The interior of the pier is also open to interpretation as to what is or is not "pilaster" and what is and is not "column." Guarino Guarini maintained the thrust of Borromini's ideas in his façade for Santa Maria Annunziata in Messina, which sports splayed pilasters, panels, pilaster stubs, pilaster-walls, dados and frames (Fig. 16).

The pilaster's resistance to theoretical transcription clearly fascinated these architects, and it is for this reason that one should resist downplaying the unusual place of the panel pilaster in Renaissance design by relegating it to the Doric or "Tuscan" order when it is clearly something else. One should also not describe as Mannerist interrogations of the panel pilaster by Michelangelo and Borromini, given that the tradition of fusing panel, pilaster, wall and surface stretched back to the late medieval period and continued well into the seventeenth century. It was a tradition that understood the nature of architectural excess as a place where the architect could provoke more than just speculation on order and proportion by thinking about the complex superficiality, as it were, of the

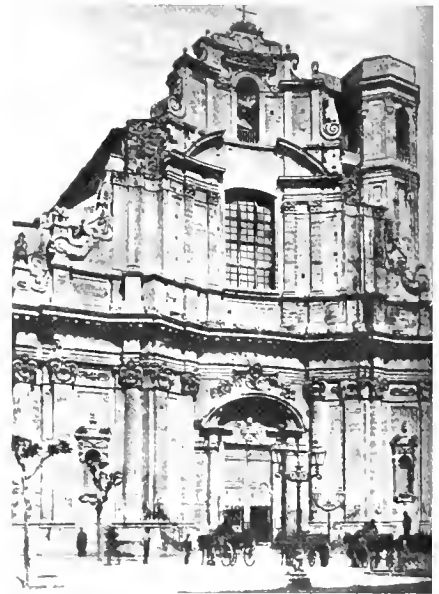
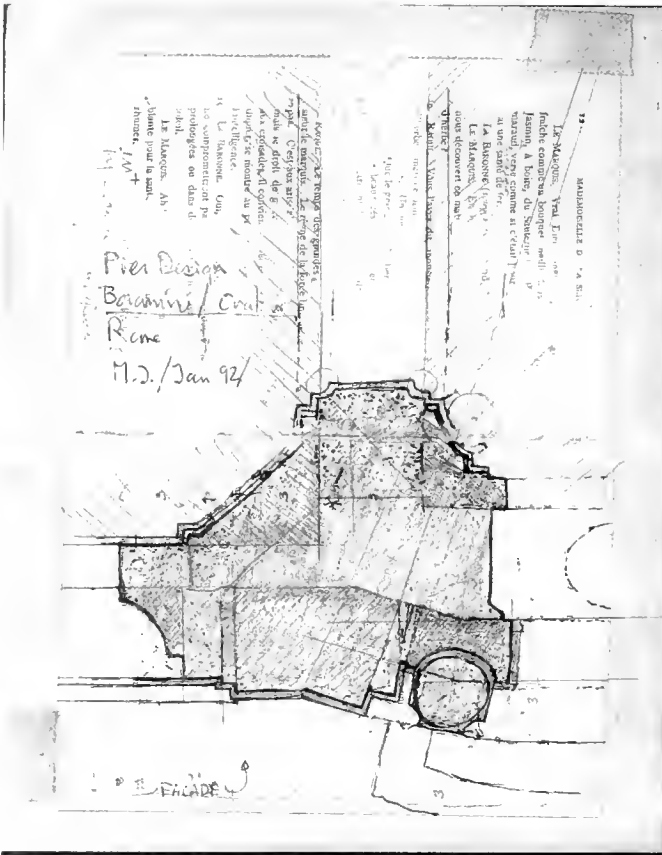


Figure 16. Guarino Guarini, Façade of Santa Maria Annunziata, Messina (ca. 1660).

architectural mass.

Eventually the search for an ambiguous yet fruitful relationship between surface and mass gave way to the more ephemeral ornamentations of the Rococo and then to the more rigorous ideals of Neoclassicism. The former moved architecture toward the cinematic and the latter, toward the horizon of functionalist modernity. Borromini's architecture stands at the threshold of that split and thus prompts tantalizing questions about the materiality of architecture squeezed between outside and inside forces. But it was Bramante who first opened up that space of inquiry, taking his lead from the Middle Ages, extending it into an aesthetic that Michelangelo and others could use as grounding for further elaboration. That the problem emerged in interstitial spaces, mezzanines, attic zones and secondary areas of architectural design was the reason for its survival, growth, and ultimate demise.

1. Cesare Cesariano, in his 1521 edition of Vitruvius, used the term "Attic" pilaster to describe that particular order. I prefer to use the term panel pilaster in order to avoid seeing these elements as conditioned by the principles of the orders.

2. Most scholars agree that Bramante was the principal designer. The sculptural ornamentation was executed by Agostino de' Ronduti.
3. See James Ackerman, *The Architecture of Michelangelo* (London: A. Zwemmer, 1961), 68, and Robert S. Lierbert, *Michelangelo, A Psychoanalytic Study of His Life and Images* (New Haven: Yale University Press, 1983), 212.

4. Giulio Carlo Argan and Bruno Contardi, *Michelangelo Architect*, trans. Marion L. Grayson (London: Thames and Hudson, 1993), 29.
5. *Ibid.*

A Return to St. Peter's: The Archaeology of a Fragment

SARAH MCPHEE

Along the north flank of St. Peter's Basilica, below the Sistine Chapel, a long line forms in summer at the entrance to the northwest stairwell and the elevator to the dome. A brick wall borders the space to the north, and there, on axis with the entrance to the basilica, a large slab of travertine is mounted on the wall (Fig. 1). The stone slab is distinctive. It is rectangular in shape and is mounted on a vertical axis (Figs. 2, 3). It measures roughly 155 cm. x 120 x 15.5 cm., and within a broad framing perimeter bevelled at the edge, sculpted moldings step ever more deeply into the surface of the stone. At the center, a large ornamental bee rises in three dimensions to a height exceeding that of the outer frame. It is a Barberini bee, the heraldic symbol of Pope Urban VIII. The outer contours of the block are irregular, having been chipped and damaged over time. Though the stone is worn, the carving is fine, suggesting that it is an elegant vestige of an earlier ensemble.

Entering the basilica, one progresses upward through the stair and the dome to the lantern. There one can survey all of Rome (Fig. 4). The view to the east follows the nave of the basilica to Mussolini's Via della Conciliazione stretching down to the walled banks of the Tiber. Beyond the river, cupolas mark the center of Rome. In spring 1641, the French draftsman Israel Silvestre recorded the same prospect with ink and wash. The earlier view provides a striking comparison (Fig. 5). Silvestre's drawing, composed of three large sheets assembled horizontally, gives a panorama of the Borgo to the east, the papal palace, Sistine chapel and Belvedere Court to the north, and, most prominently, the nave of St. Peter's and the ill-fated bell tower Gianlorenzo Bernini built above the south flank of the facade from 1638 to 1641. We see the tower here with two stories complete, the scaffolding in place for the mezzanine level that would support the crowning finial.¹

The drawing by Silvestre and the bell tower it preserves were the subject of a detailed article published by Henry Millon in 1962.² Millon revealed the secrets of the drawing by reading in close detail, peeling back the layers of visual evidence and placing them in historical context. His acute observations and the slow accretion of historical fact allowed for a precise dating of the sheet itself, but also led to essential revisions in the history of St. Peter's square and Bernini's bell tower. The essay is emblematic of Millon's gifts as a teacher and scholar and is one of many contributions in a career that has had St. Peter's as its constant touchstone. In this brief note I return to his subject, and in emulation of his method try to tease out a story from a fragment.

Anyone who has worked on the site of St. Peter's, in its archives and under its vaults, knows that building takes place there under very careful watch and that materials are rarely wasted. The bell tower visible in Silvestre's drawing is a case in point. The tower had a brief life. Commissioned by Pope Urban VIII Barberini (1623-44), the tower rose in three stories: the first trabeated, the second arched, the third a columnar mezzanine topped by a pyramidal finial. The tower stood for just six years (1641-46). Urban VIII's successor, Pope Innocent X (1644-55), judged the tower unsound because of faulty ground beneath the southeast corner of the basilica. He ordered the tower dismantled and its carefully dismembered parts lay atop the southern portion of the nave awaiting re-



Figure 1. View of the north flank of St. Peter's basilica, Rome.



Figure 2. Travertine coffer with Barberini beehive (1639). Saint Peter's, Rome.



Figure 3. Travertine coffer with Barberini beehive (1639). Saint Peter's, Rome.



Figure 4. View looking east from the dome of St. Peter's.



Figure 5. Israel Silvestre, Panorama of the Vatican from the Dome of St. Peter's (1641). Graphite, gray and brown wash on cream antique laid paper, 33.5 mm. x 113.5 mm. Courtesy of the Fogg Art Museum, Harvard University Art Museums, Gift of Mr. And Mrs. Philip Hofer.

building from 1647 until 1653. The new project envisioned never came to pass, and the materials from the tower were either sold off to other projects in the city or reused elsewhere on the site of St. Peter's.

One finds columns from the tower in the porches of the twin churches in the Piazza del Popolo, colonnettes in the lantern of S. Agnese, and travertine blocks in the porch of S. Maria in Trastevere. On the site of St. Peter's, angels from the towers reappear in the side aisles of the basilica, and Ionic capitals from the third level in the sacristy. Every so often St. Peter's yields up a new puzzle: an abandoned stair, a foundation stone, a block of travertine with a bee on it. Given the nature of building at the Vatican, the unusual continuity of staff and administrative habits, one assumes that the sudden appearance of a piece of sculpted stone can be explained, that with careful looking and a bit of persistence one can recover a history.

In fact, the rectangular slab of travertine that today marks the tourist entrance to the dome of St. Peter's had a previous life. It started out as a block quarried in Monte Rotondo or Tivoli, and was brought to the site of St. Peter's by boat on the Tiber. Its graceful moldings and prominent bee were designed by Bernini and carved to his specifications in October 1639 by Lorenzo Flori or Balsimello Balsimelli. The documents survive in the Archives of the Reverenda Fabbrica.⁷ Here one learns that the stone was originally cut for the first level of the bell tower, where it was one of several ornamental coffers suspended between the architraves that form the trabeated openings (Figs. 6, 7). Coffers adorned with bees, large and small, were flanked by stones bearing other Barberini and papal heraldry: suns, laurel wreaths, crossed keys, papal mitres and stoles. The blocks varied in size, and the one that adorns the brick wall along the north flank of the basilica is described as "piccolo" or "small," measuring $5 \frac{2}{3} \times 3 \frac{1}{3}$ palmi. For a rough sense of the original effect of the ensemble one has only to enter the narthex of St. Peter's. In his design for the first level of the tower, Bernini was alluding to Maderno's main facade and the paired columns flanking the entrances and supporting architraves from which coffers are suspended (Fig. 8). The carved moldings and open fields supporting prominent heraldic symbols are also consistent with the panels that adorn the underside of the balconies at the windows of the Benediction Loggia (Fig. 9). Like the bell tower, these balconies include panels bearing papal mitres and stoles. Though it was located far above the piazza, at over double the height of these balconies, Bernini took great pains to integrate the vocabulary of his tower design with that of the preexisting facade.

When the tower was dismantled under Urban VIII's successor, Innocent X, bees were no longer desirable. The rebuilt tower would bear the Pamphili family heraldry: doves with olive branches and fleurs-de-lys. As members of the Barberini family were sent into exile, the bees scattered: Urban VIII's relatives sought refuge in France and the stones adorned with bees disappeared.

But nothing at St. Peter's strays very far, and with persistence one finds further answers. In 1994 a structural problem presented itself in the basilica beneath the southeastern corner of the nave. The polychrome marble floor Bernini had laid for Jubilee 1650 was shifting in the area just in front of the Baptistry Chapel and serious cracks had developed. Three centuries earlier, shifts in the unstable soil beneath this same portion of the basilica had caused the failure of Bernini's bell tower. Stonemasons were called in to pull up the marble and stabilize the situation.

To understand the fate of the stone slab one must tap the institutional history and oral memory of St. Peter's. Within the Fabbrica of St. Peter's jobs were, until recently, hereditary. Workers often spent their lives on the site. Jobs handed down from generation to generation guaranteed continuity of care and ensured that the institutional

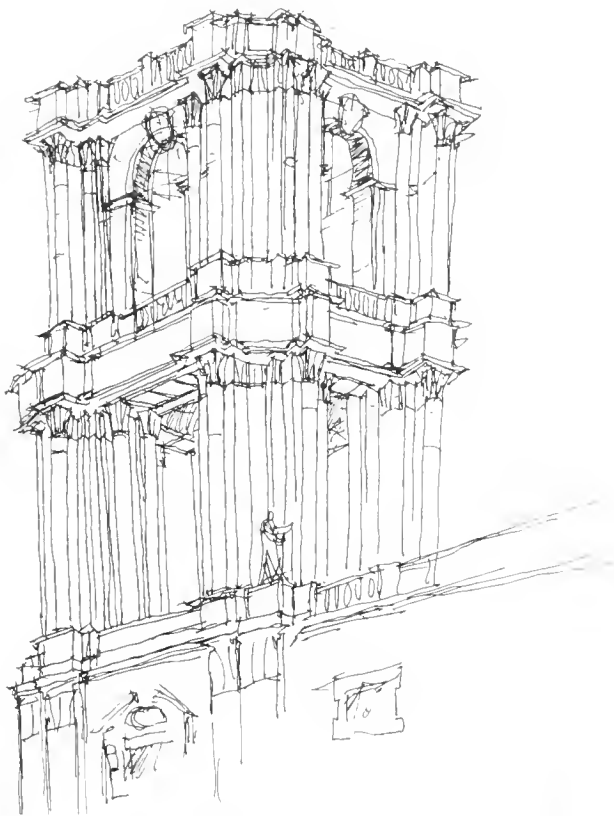


Figure 6. Architectural sketch showing Bernini's south bell tower and the position of the stone coffers between the architraves of the first level. (Author).

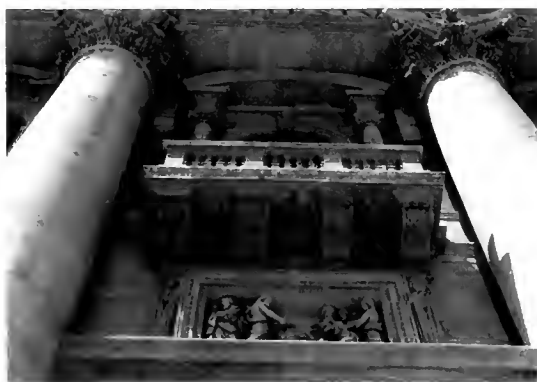


Figure 9. View of ornamental coffers beneath the central balcony of the Benediction Loggia on the façade of St. Peter's.



Figure 7. Architectural sketch suggesting the original position of the stone coffer. (Author).

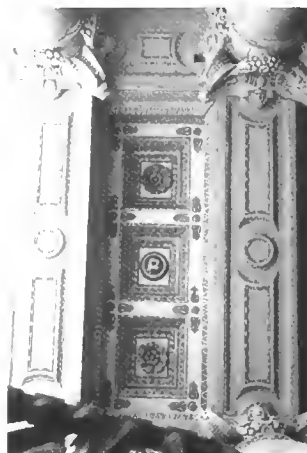


Figure 8. View of ornamental coffers between the architraves at the northern entrance to the narthex of St. Peter's.



Figure 10. Marble roundel from the floor of St. Peter's.

memory of the basilica was long. Men like Alberto Borzoni joined the Fabbrica at the tender age of fourteen. He learned to tend St. Peter's in myriad ways and when his father retired he became the last of a dynasty of bell ringers. The extent of his lineage is suggested by eighteenth-century graffiti found in the north bell tower of St. Peter's, reading "Borzoni." Alberto De Luca, a stonemason in his sixties, takes pride in his knowledge of the history of the basilica where he has spent his life. De Luca offered to explain the sudden appearance of the stone—but not before he had asked a battery of questions of his own and had satisfied himself that the questioner was worthy of his attention.

De Luca was one of the stonemasons working to repair the marble floor in front of the Baptistry. There they found the travertine slab. It seems that after the destruction of the bell tower, the coffers from the first level, or at least those bearing Barberini bees, were quickly reused, face down, as *fodera* or lining for the slabs of more precious marble laid on the basilica floor for Jubilee 1650. The date of the discovery of the slab is recorded by a roundel with the arms of the current pope, which was placed in the marble floor after the repair was complete (Fig. 10). It bears the date: 1994. The travertine stone adorned with the bee was cleaned up and later mounted on the wall where it hangs today, probably for Jubilee 2000.

Like a moth to flame or a bee to its hive, scholars who have worked on St. Peter's feel compelled to return. And the great basilica is notoriously parsimonious with her own materials. One scholar has estimated that there are over 10,000 bees in the city of Rome. Since Jubilee 2000 there is one more. The irregular perimeter of the travertine slab bespeaks its life beneath the marble floor of St. Peter's, but the grace of its carving recalls an earlier moment and the extraordinary refinement of Bernini's bell tower design.

1. For Bernini's bell tower, see Sarah McPhee, *Bernini and the Bell Towers: Architecture and Politics at the Vatican* (New Haven: Yale University Press, 2002).

2. H. A. Millon, "Notes on Old and Modern Drawings. An Early Seventeenth Century Drawing of the Piazza San Pietro," *Art Quarterly* 25 (1962), 229-41.

3. "A di 26 8bre 1639. Misura, et stima de diversi lavori d'intaglio in Trevertino fatti a manifattura di M. Lorenzo Flori per servizio de riquadramenti nelli soffitti trà gli architravi del Campanile della Reverenda Fabbrica di S. Pietro misurati, et stimati ..." Archivio della Reverenda Fabbrica di S. Pietro (AFSP), Piano I, Serie 4, vol. 22, f. 249r.

-Per l'intaglio di n. tre para di chiave in tre riquadramenti delle facciate larghe l'uno palmi 6 2/3 larg. palmi 2 5/6 con suoi cordoni, et fiocchi	24
-Per numero due regni con sue stole in 2 riquadramenti delle facciate larghe a ? l'uno palmi 4 5/6 larg. palmi 2 5/6	7
-Per due rami di lauri in due altri riquadramenti de vani piccoli ? l'uno palmi 5 2/3 larg. palmi 3 1/3 con un'ape palmi 1 3/4	14
-Per un sole in un altro de detti vani palmi 3 3/4 larg. palmi 3 1/3	5
-Per numero 4 Ape ne vani grandi et piccoli, cioè 2 long. palmi 2 l'una, et l'altre palmi 1 3/4 insieme	7-40
-In tutto importono scudi cinquantasette b. 40	57-40

Andrea Ghetti, economo

Gio. Lorenzo Bernini

Pietro Paolo Drei, soprastante

"A di 26 8bre 1639. Misura, et stima de lavori diversi d'intaglio in Trevertino fatti a manifattura di M. Balsimello Balsimelli per servizio di riquadramenti nelli soffitti trà gl'architravi del' Campanile della Reverenda Fabbrica di S. Pietro, misurati e stimati," AFSP, Piano I, Serie 4, vol. 22, f. 251:

-Per l'intaglio di numero due rami di lauro in due riquadramenti di vani piccoli l'uno palmi 5 2/3 larg. palmi 3 1/3 con un'ape per ciasched'uno per 1 3/4	14-
-Per un Sole in un'altro di detti vani palmi 3 3/4 larg. palmi 3 1/3	5-
-Per numero quattro ape ne vani grandi, et piccoli, cioè due palmi 2 l'altre palmi 1 3/4 insieme moneta	7-40
-In tutto importono scudi venti sei b. 40 dichiara	26-40

Andrea Ghetti, economo

Gio. Lorenzo Bernini

Pietro Paolo Drei, soprastante

Thoughts on the Ellipse:

Borromini's Staircase at the Palazzo Barberini

NOAH RESNICK

It is often the case that biographical approaches in art and architectural history focus on the mythologized psychology of the artist at the expense of specific works and the formal explorations they make manifest.¹ The events and controversies surrounding Francesco Castello Borromini's departure from his apprenticeship with Gianlorenzo Bernini, for instance, have prompted literary anecdotes and a dramatization of the rivalry between the two.² The relationship between the charismatic, likeable master and his tortured, self-defeating apprentice has become nothing less than a cliché in the history of the Italian Baroque, contributing to the characterization of Borromini as a melancholy genius who suffered for his art.³ Regardless of the extent to which professional clashes over commissions and design authorship fueled irresolvable emotional conflicts, the works produced during the period of their initial collaboration (1626-32) inevitably left an impression on Borromini's architectural sensibilities, the marks of which can be detected in nearly every building project he would subsequently undertake.⁴ Those that date from the end of his apprenticeship—the crowning of the Baldacchino at Saint Peter's (1627-33) and two staircases for the Palazzo Barberini (1629-32)—can be understood to correspond to Borromini's declaration of architectural independence. When placed in the context of his overall oeuvre, these projects emerge as a manifestation of his developing theories of space and perspective. Central to these theories are a specific formal motif and an architectural element: the so-called dolphin or S-curve and the elliptical staircase.⁵

Borromini and Bernini were the same age when they began their collaboration in Saint Peter's in the early 1620s.⁶ Architecture and the arts in these years of the Catholic Revival were defined by a climate of optimism following the ascetic and apologetic period of the Counter-Reformation. The two young artists first came into contact with each other in 1624, when Bernini was commissioned by Pope Urban VIII to undertake the decoration of Michelangelo's crossing at Saint Peter's and the construction of the Baldacchino.⁷ Borromini had been working at the enormous construction site since about 1619—initially as a stonemason then later as an apprentice to the papal architect Carlo Maderno (actually a distant relative)—before he was asked to assist Bernini in the execution of the Baldacchino.⁸

The contrasting nature of their personalities was apparent from the start. Bernini, according to Anthony Blunt, was "brilliant and precocious, charming, sociable and tactful, moving easily in the papal court."⁹ His sculptural aesthetic responded in kind, and was of a grand theatrical style that echoed the confident spirit of the Catholic Revival. His work typically relied on the manipulation of scale, dramatic lighting effects, the fusion of painting, sculpture and architecture, the dramatic extension of forms and action across space, and the use of rich materials such as colored marbles and gilding. His architectural forms, however, remained relatively simple structures that served as armature for his sculptural decoration. Borromini, by contrast, was seen by his contemporaries and biographers as a neurotic and unhappy man lacking all social grace. Nervous and uncompromising, he eventually developed a fear of all personal contact, which purportedly bordered on the irrational.¹⁰ This dark side was coupled with a passionate devotion to his craft. In such projects as S. Carlo al Quattro Fontane, he reportedly worked

with obsessive concentration, usually on a small scale, and never in color. Most often, sculpture was included only in the surface decoration of his buildings, and light served to emphasize space rather than to create dramatic effects. He attained his spatial qualities by purely architectural means, thus achieving a result in which, as Blunt put it, "the essentially Baroque feature of movement is given its most brilliant expression, undisturbed by the distractions of color, richness of material or drama."¹¹ The differences between Borromini and Bernini in aesthetic approach already appear in the early works at Saint Peter's in which sculptural elements in the decoration of the crossing can be distinguished by opposing concepts of plasticity.¹² Such differences no doubt made collaboration on the Baldacchino difficult.

The nature and scope of Borromini's contribution to the decade-long project is difficult to ascertain.¹³ It is certain, however, that he had no involvement in either the planning stages or the first phase during which the four spiral columns were erected. Yet he claimed as his own the invention and execution of the crowning. Papal documents in the form of payment records show that Borromini was given the task of preparing in full scale the designs furnished by Bernini and of overseeing the execution of the bronze decorative elements. There is strong evidence, however, to support Borromini's claim that he took a much more active role in the design. Bernini was only twenty-six years old when he was given the commission in 1624, and while his virtuosity as a sculptor was already evident, he had until that point received no real training as an architect. He almost certainly relied upon the talent and technical expertise of his assistant in forming the fundamentally architectonic solution of the crowning. Borromini's skill was already widely recognized as early as 1623; he was considered Maderno's most important assistant, contributing in vital ways to the latter's architectural projects.¹⁴

The last payment records referring to the Baldacchino in 1633 show Borromini receiving twenty-five scudi for the month of January as compared with Bernini who received 250 scudi for the same time period.¹⁵ The documents also underscore his active role in the design execution: "Francesco Castelli ... is obliged to make designs on the copper, and these are to be done so that the carpenters and those who beat the copper cannot err."¹⁶ Although the specific purpose of this last stipulation remains unclear, it was possibly an attempt to prevent additional mistakes in execution—the inference being that previous errors were committed intentionally by Borromini as protest against "economic injustices" he had had to endure.¹⁷ Discrepancies in pay combined with Bernini's supposed lack of presence at the construction site may have fueled Borromini's accusations that the former took credit for his contributions to a major papal monument and makes clear the reasons for which he would have decided to pursue an independent career at that time.

According to Blunt and Heinrich Thelen, Borromini's input into the design for the Baldacchino can be documented in several drawings that show the altar in perspective at the end of the nave.¹⁸ In two of these drawings, Borromini is careful to include the surrounding architectural elements of Michelangelo's crossing in full detail in order to better assess the impact of his proposed design *in situ* (Fig. 1).¹⁹ The most striking departure from Bernini's proposal for the crown—which planned for two crossed arches surmounted by a statue of Christ the Redeemer—was the inclusion of four dolphin or S-curves serving as support for a monumental cross. That these curves remain in place today in the final work is, for Blunt, substantial evidence of Borromini's influence on the aesthetic and structural outcome of the whole.

Borromini maintained a deep interest in the form of the volute with the dolphin curvature; it became a decorative motif in some of his most prominent later works.²⁰ Assuming that he was protective of his own ideas, and treated them, as Filippo Baldinucci said, "like his own children," it would be unlikely that he would have corrupted his



Figure 1. Francesco Borromini, Study drawing of the proposed Baldachino design *in situ* (Albertina Museum, Vienna).



Figure 2. Dolphin or S-curve derived from an ellipse (Author)

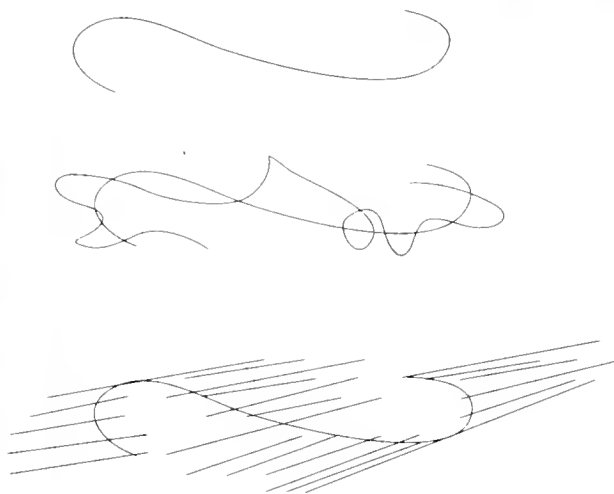


Figure 3. From Gilles Deleuze, *The Fold* (1993), 14-15: " ... The first draws the inflection. The second shows that no exact and unmixed figure can exist ... The third marks the convex side with shadow, and thus disengages concavity and the axis of its curve, that now and again changes sides from the point of inflection."

best buildings with a form invented by his rival.²¹ Paolo Portoghesi has argued that by inserting the dolphin curve as well as other elements from the Baldacchino crown into the context of his later architectural projects, he was making a statement of paternity over the designs for which Bernini was ascribed full credit.²² In addition, the origins of the elongated S-curve leads to the speculation that its placement on the Baldacchino was the result of Borromini's influence. It has no Roman or Tuscan precedents for Bernini to have picked up on, but it does have certain Lombard ones.²³ It can be found in many of the Milanese buildings Borromini would have seen in his youth.²⁴ The rest of the crowning—agitated angels, Barberini bees, the illusion of the tassels being blown in the wind, and the frenetic movement of the composition—are all theatrical effects that sit well within Bernini's repertoire. Yet the fundamental spatial and physical structure of the altar arguably presupposes an architectural sensibility and maturity that he would not gain for another twenty years.

The dolphin or S-curve came to have a prominent place in Borromini's architectural vocabulary, and this encourages us to consider its conceptual and geometric significance. Derived from the ellipse, it offers the architect the possibility of exploring the infinite variations of any curved surface (Fig. 2). This idea of infinite variation or variability has led modern critics and cultural theorists to speculate on the aesthetic and metaphysical meanings of the form. Among them is the Poststructuralist philosopher Gilles Deleuze, who in *The Fold: Leibniz and the Baroque*, defines variation of the S-curve as an "inflection" or "elastic point."²⁵ Drawing upon Leibniz's theory of the monad and Paul Klee's ideas on movement, Deleuze includes a diagram of the succession of three such curves (Fig. 3).²⁶ Inflection or variation is the foundation of Baroque mathematics, according to Deleuze. Furthermore, the apprehension of infinite mathematical variability is analogous to the viewer's changing position. Hence point of view "amounts to a relativism, but not the relativism we take for granted. It is not a variation of truth according to the subject, but the condition in which the truth of a variation appears to the subject. This is the very idea of Baroque perspective."²⁷ Deleuze employs the dolphin curve as a model for Baroque perspective. Each point of inflection is actually a place, a position of convergence between a specific tangent and its perpendicular "point of view." Each variation on the curve correlates to the consciousness of the subject through the point of view from which the tangent emanates. Infinity is not understood simply as the variation of the subject's point of view but, rather, is the subject's point of view on variation. In other words, the variable curve to which Borromini was attached potentially becomes the graphic representation of Baroque infinity, which is comprised of infinite tangents on a curve "that implies as much the beginnings of a continuous variation of matter as a continuous development of form."²⁸ Matter and form: the dolphin or S-curve is correspondingly the formal link that Borromini used in the Baldacchino to mediate between sculpture and architecture, between object and space. It offers the transition from the two-dimensional verticality of Bernini's spiral columns to the three-dimensional elliptical space of the crown.

The transformation of the S-curve from sculptural motif to architectural device occurs, I want to suggest, in Borromini's projects for the staircases at the Palazzo Barberini in which he developed his Baroque perspectival system. If the controversies surrounding the crowning of the Baldacchino portray Borromini's desire to declare his independence as an architect, his contribution to the Palazzo Barberini are what display his maturity and ability to take that step. The Palazzo Barberini is something of an enigma in Baroque architectural history.²⁹ There are no obvious precedents for its plan in Roman palace architecture, and its form was never duplicated. The motivations behind its design are difficult to determine as is the nature and scope of the contributions made by major seventeenth-century Roman architects: Maderno, Borromini, Bernini, and Pietro da Cortona.³⁰ The palace is situated on the north slope of the Quirinal hill with a direct view of Saint Peter's. It dominates the visual

context from both the north and the west, but avoids any direct connection with either the street or the piazza. Urban VIII's brothers, Cardinal Francesco and Principe Taddeo Barberini purchased the old Sforza palace and its surroundings with the intention of transforming it into Rome's grandest papal palazzo. The task of planning the building was given to Maderno, who was at least seventy years old in 1625 when he received the commission.³¹ While he worked on the palace until his death, his exact contribution is not easily documented. His failing health may have restricted the amount of time and energy he could devote to the project, and his assistants—most notably, Borromini—expectedly worked in his name. During nearly ten years of apprenticeship with Maderno, Borromini developed a great respect for him that was reflected in his decision to be buried by his side.³² He considered Maderno to be the most daring of the Lombard architects in Rome and valued his experimentation in three-dimensional space planning. Borromini, however, never attempted to mimic Maderno's style or method of design. The most direct assimilation is found in Borromini's technical mastery and the methods he used to plan space.³³ In the last years of his life, Maderno purportedly made Borromini responsible for directing the work on the palazzo, designing details, and assisting in the general space planning.

Upon Maderno's death on January 31, 1629, Bernini was chosen to take charge of the project as master architect.³⁴ This was most likely at the behest of Urban VIII, who constantly encouraged Bernini to expand his training to include painting, poetry, and architecture, and who was known to have disliked Borromini. Urban VIII hoped to promote Bernini to the position of papal architect, and may have intended the commission as a means to that end.³⁵ At this point in his career, Bernini had little technical experience and hence was only prepared to give outward form and expression to the palace. He must have relied, as with the Baldacchino, on Borromini's skill to confront any structural or space planning issues that might arise. Indeed, most of the surviving floor plans, sketches, details, and elevations are in Borromini's hand (Fig. 4, Pl. 2).³⁶ These reveal the method he used to study Maderno's spaces. He typically superimposed two or three floors on one plan, distinguishing one from the other through the use of cross hatching and broken lines. In this way, he was able to study spatial relationships on multiple levels as well as articulate points of formal and structural coincidence.

Spatial complexity was introduced early on by Maderno, partly as a result of having to accommodate the existing Sforza palace. These complexities are cleverly navigated by means of the two major staircases in the central section. In both, Borromini's skill and ingenuity are evident. The larger and more complex of the two is defined as a square-well type. Patricia Waddy more accurately describes it as being a succession of three shapes:

It begins below at the north entrance, and rises in a straight run to the entrance of Taddeo's apartment on the ground floor. Visitors could then ascend to Taddeo's wife's apartment on the piano nobile by entering a stair that at first appears to be a switchback with its three intro steps, landing, and long first flight; but as they ascended would be surprised by the appearance of the open well and the transformation of the stair into a square figure.³⁷

A straight run, a switchback, and a square-well: the complex succession can be explained in great part by the numerous constraints to which the design of the staircase had to conform. These included: the combination of new floor levels with those already established by the old Sforza palace; the need to engage with the procession set up by Taddeo's single flight in the heart of the building; the desire to make the entrance to the stair on the ground floor symmetrical with that of the elliptical stair to the south; the articulation of entrances to multiple apartments; and lighting requirements. The solution, in Waddy's words, "involves superimposition of stairs, transformation of a familiar form into the less common square-well stair, and exit from the stair at a landing in the midst of a



Figure 4 Francesco Borromini, Early piano nobile plan of the Palazzo Barberini (Albertina Museum, Vienna).



Figure 5. "Square-well view," from *Seventeenth-Century Roman Palaces* (1990).



Figure 6. Francesco Borromini Arcade, Palazzo Spada. (Author).

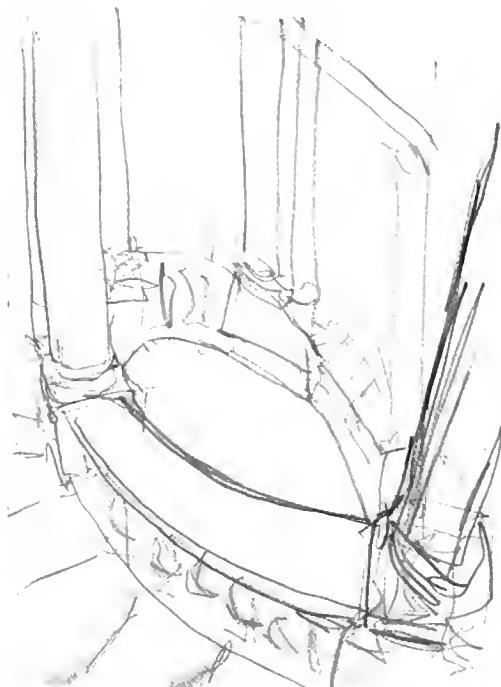


Figure 7. Elliptical staircase, Palazzo Barberini. (Author).

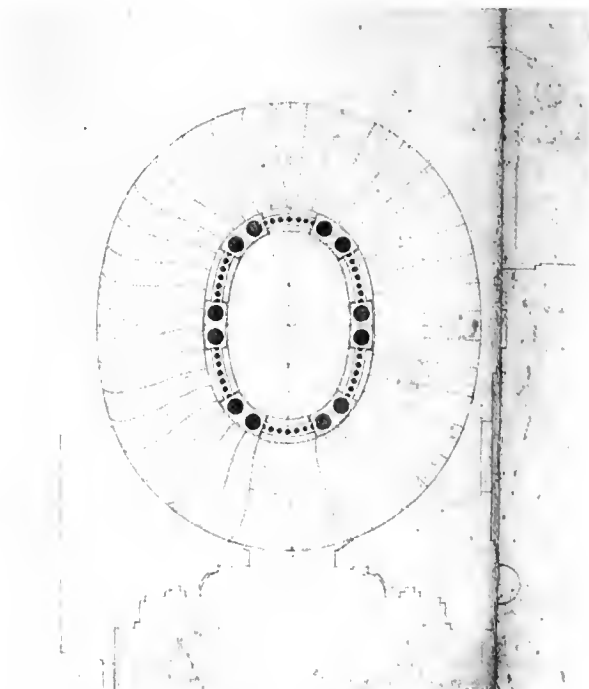


Figure 8. Francesco Borromini, Study drawing of the elliptical staircase in the Palazzo Barberini (Albertina Museum, Vienna).

flight, all with apparent ease and grandeur.”³⁸

The staircase is traditionally attributed to Bernini, but the drawings and spatial complexity indicate a design that was initially planned by Maderno then completed and executed by Borromini.³⁹ Bernini’s contribution was most likely limited to certain specific forms (notably the perspectival framing of niches on the landings). Borromini’s technical skill can be seen in the arcades that frame the principle stair (Fig. 5). The visual system that he was beginning to explore in these arcades would be clearly articulated a few years later in his false perspectival arcade for the Palazzo Spada (Fig. 6). The latter project was an experiment that consisted in manipulating spatial perception by means of geometric projection and the alteration of traditional perspective methods. The gallery, which extends a little over eight and half meters, appears to the eye to be thirty-seven meters long. In a recent study and reconstruction, Rocco Sinisgalli determined that Borromini incorporated fifteen sequential viewpoints into the perspectival geometry of the arcade.⁴⁰ Here spatial meaning only reveals itself by means of a dynamic temporalized vision—of movement through the space.⁴¹ The carefully arranged spatial contraction and dilation can only be perceived and experienced as one passes through the arcade or ascends and descends the stairs. What Borromini worked out in the square-well stair of the Palazzo Barberini and later in the gallery of the Palazzo Spada is a general theory of vision, which asserts that perspective, even while being generated according to the most rigorous geometric logic, can have the perceptual effect of contracting, expanding, or even annulling space. His use of perspective as an instrument for measuring space is coupled with his use of it as a tool for manipulating and generating spatial meaning through movement.

This theory is clearly and beautifully articulated in the smaller set of stairs accessing Cardinal Francesco’s side of the Palazzo Barberini (Fig. 7). It is one of the few major elements of the building whose design and execution can be fully attributed to Borromini. The originally circular plan was modified to an ellipse, which was more compact, served theoretical purposes, and formally anticipated the large oval salon on the piano nobile (Fig. 8). Its rise from the ground floor to the Cardinal’s library is simple and unbroken. Yet that simplicity is deceptive, for the ellipse allows Borromini to create a complex spatial experience once again activated by movement.⁴² While actual precedents were few, Andrea Palladio wrote appreciatively of the use of elliptical staircases

in narrow spaces particularly, because they occupy less room than the straight, but are somewhat more difficult to ascend. They succeed very well that are void in the middle, because they can have light from above, and those that are at the top of the stairs, see all those that come up, or begin to ascend, and are likewise seen by them. The oval stairs are very beautiful and agreeable to see, because all of the windows and doors come to the head of the oval and in the middle are sufficiently commodious.⁴³

Borromini expanded on the basic Palladian model first by eliminating intermediary landings, and second, by carefully altering tread sizes according to their position in the oval plan. These changes articulate a vertical space defined by an intriguing set of visual and temporal rhythms. Space and velocity cycle through moments of compression and expansion as the viewer travels up or down. The dolphin curve appears not only literally, but also in the spatial diagram that movement on the stair initiates. As the two-dimensional plan of the ellipse is stretched vertically into three dimensions, a necessarily circuitous trajectory recreates the modulated form of the S-curve. This elliptical movement creates a shift in the density of real space, geometric space, and psychological space. Borromini was aware of the illusional as well as delusional values of a method that calculated the interweaving of these three types of space. Borromini’s camouflaging of depth is, as Paolo Portoghesi says, “a

pretext for the modification of space, that always has an amplifying power, and responds to the principle of spatial economy."⁴⁴

Borromini's theories of vision and movement draw heavily on the architectural concepts of Michelangelo. Borromini in many ways saw himself as the latter's spiritual heir, and it can be argued that he alone among Michelangelo's successors understood and meaningfully developed the fundamental innovations and discoveries his architecture exhibited. According to Baldinucci, during his early years as a stonemason at Saint Peter's, Borromini spent his free time conducting rigorous analyses of Michelangelo's architecture and making countless sketches of the details.⁴⁵ Borromini, as portrayed by his biographers, felt that he truly loved Michelangelo's buildings, and thus subscribed to the principles on which they relied: inventiveness of plan; plastic treatment of the wall; carefully thought-out details; and fundamental knowledge and subsequent reinterpretation of Vitruvian rules. All of these principles were combined with an expertise in mechanics as well as skill in construction and craft. Borromini's buildings, more than any other seventeenth-century architect's, exhibit a consistent adherence to these principles. Michelangelo's influence, however, was more than a matter of details and convergence of taste and style. It was also found in Borromini's spatial order and its relationship to movement. In his perspectival theories and methods, Borromini expanded on Michelangelo's fundamental concept of a building's relation to the human body in motion. It was this idea that initially led Michelangelo to depart from the Renaissance tradition of planar architecture. The most legible example of his experiments along these lines is his vestibule for the Laurentian Library in Florence, a project that Borromini studied intently (as his designs for the Palazzo Barberini make clear). Although Borromini used a number of decorative features from the Laurentian Library in the Palazzo Barberini, the grand staircase that leads up to the reading room was of enormous importance. The curvilinear forms of Michelangelo's treads spill out to cover the greater part of the vestibule's floor area, prompting Rudolf Wittkower to describe them as a "cascade" and to claim that "one is forever torn between the upward and the downwards tendencies."⁴⁶ But while Wittkower praised its gracefulness and beauty of form, he saw it as illogical and nonfunctional. Yet one of the most enduring aspects of Michelangelo's design process—something Borromini revealed in his own designs—is that even the most fantastic or intriguing formal elements can offer the most efficient and practical solution, and owe their genesis to a concise geometric logic.⁴⁷ An emphasis on the practical aspects of unique form translates directly into Borromini's elliptical staircase; here, the meaning of experiential qualities comes directly out of Michelangelo's theories and techniques.

Of all his contributions to the planning, details, and execution of the Palazzo Barberini, it is the staircases that express the thoughtfulness and maturity of a master architect. Borromini and the staircase shared a common trajectory, and together contributed significantly to defining the role of movement in Baroque architecture. For just as Borromini was making the transition from servile apprentice to independent architect, so too was the staircase making the transition from a purely utilitarian solution or even an afterthought to a legitimate architectonic type.⁴⁸ Prior to the Baroque period, stairs were treated as a necessary appendage to a building. Their forms, while sometimes handled masterfully, were generally based on practical tradition and the builder's experience rather than on a theoretically grounded system. An attempt to design stairs through a Vitruvian approach would yield significantly fewer points of departure for a creative solution. Even Palladio's appreciation for the elliptical stair was limited to efficiency in plan and the light it made available. Stairs were often left out of the fundamental narrative that dictated a building's meaning. Baroque architects, following the lead of Michelangelo's Laurentian stairs as well as those at the Campidoglio, began to impose the Vitruvian principles that had previously been absent: the position in plan was determined by *utilitas*; the size and shape was defined by *firmitas*; and the form of

the stair was articulated to reveal the *venustas*. Supporting these utilitarian, formal, and aesthetic principles were new theories of movement and space as well as the values of social hierarchy. The relationship between building and stair became analogous to that between the human body and its veins; the stair was an infrastructure exquisitely designed to transport the life of the building. Inseparable from the proportions of the human body in motion, it newly translated the unconscious reflex of locomotion into a physical object. More importantly, the stair became an exhibition of power displaying its users' connection with the building and the building's connection with the city. It became a device that, by linking together the different levels of a structure or space, simultaneously portrayed and transcended various levels of the social order. The vertical path became a gauge recording not just the physical polarity of top and bottom, but the difference between rise and fall, shadow and light, gravity and levity, the pope and the congregants, the king and his subjects.

To conclude, the staircase gave Borromini an opportunity to create an architectonic space by implementing sculptural forms and techniques. Unlike Bernini's use of sculpture in architecture, in which action is deployed through figurative elements in space, Borromini's space becomes a single, fluid figure in which the viewer is enveloped. The unity of sculpture and architecture for Borromini exists not in the craft of surface, but in the quality and legibility of a space defined by a constantly moving point.

1. The tendencies owe their formulation to Renaissance texts such as Giorgio Vasari, *The Lives of the Artists*, trans. Julian Conaway Bondanella and Peter Bondanella (Oxford: Oxford University Press, 1991), and *The Autobiography of Benvenuto Cellini*, trans. John Addington Symonds (New York: The Modern Library, 1927). See also Ernst Kris and Otto Kurz, *Legend, Myth and Magic in the Image of the Artist* (New Haven: Yale University Press, 1979), and Rudolf Wittkower and Margot Wittkower, *Born Under Saturn* (New York: Random House, 1969).

2. Recent treatments include Sabine Burbaum, *Die Rivalität zwischen Francesco Borromini und Gianlorenzo Bernini* (Oberhausen: Athena, 1999). Paolo Portoghesi, "Bernini e Borromini. I due rivali," in Maria Grazia Bernardini, ed., *Bernini a Montecitorio* (Rome: Camera dei deputati, 2001), 31-44, explores instances of difference and exchange in the architectural works. All this extended into competition for urban projects: see Tod A. Marder, "Borromini e Bernini a piazza Navona," in Christoph Luitpold Frommel, Elizabeth Sladek, eds., *Francesco Borromini. Atti del convegno internazionale Roma 13-15 gennaio 2000* (Milan: Lecta, 2000), 140-145; and Joseph Connors, "Alliance and Enmity in Roman Baroque Urbanism," *Romisches Jahrbuch der Bibliotheca Hertziana* 25 (1989), 207-294.

3. See Rudolf Wittkower's classic essay, "Francesco Borromini, his Character and Life," *Studies in the Italian Baroque* (London: Thames & Hudson, 1975), 153-176.

4. These include S. Carlo alle Quattro Fontane, S. Ivo della Sapienza, and S. Agnese in Piazza Navona. On the relationship of Borromini to Maderno with regards to the latter, see Frances Huemer, "Borromini and Michelangelo, II: Some Preliminary Thoughts on Sant'Agnese in Piazza Navona," *Source* 20.4 (Summer 2001): 12-22.

5. One of the earliest examples in Rome—and one that Borromini surely would have known—is the staircase in the Palazzo del Quirinale by Ottaviano Mascarino.

6. Paolo Portoghesi, *The Rome of Borromini: Architecture as Language* (New York: George Braziller, 1968), 31, makes sure to stress the collaborative nature of their relationship at St. Peter's even though archival documents and payment records underscore Borromini's role as Bernini's assistant.

7. On Urban VIII's patronage of the two architects, especially at Saint Peter's and the Palazzo Barberini, see Torgil Magnuson, *Rome in the Age of Bernini* (Atlantic Highlands: Humanities Press, 1982), vol. 1, 191-204.

8. Paolo Portoghesi, "Birth of the Baroque in Rome," in Henry Millon, ed., *The Triumph of the Baroque: Architecture in Europe 1600-1750* (New York: Rizzoli, 1999), 32-55, emphasizes Maderno's work at St. Peter's as well as discusses the Baldacchino.

9. Anthony Blunt, *Borromini* (Cambridge: Harvard University Press, 1979), 20.

10. A veritable "persecution mania," *ibid.*: 21, seemingly led Borromini to destroy the bulk of his unexecuted designs before committing suicide in 1667.

11. *Ibid.*: 24.

12. Borromini's carvings (such as the cherubim) refer to a Lombard tradition of formal clarity, which as Portoghesi (1968), *op. cit.*: 28-29, has pointed out, contrasts directly with Bernini's intermingling of materials. The difference extended to fundamental differences in architectural principles; see Joseph Connors, "Bernini's S. Andrea al Quirinale. Payments and Planning," *Journal of the Society of Architectural Historians* XLI.1 (Mar. 1982), 20-22; 32-33.

13. See W. Candler Kirwin, *Powers Matchless: The Pontificate of Urban VIII, the Baldacchino, and Gian Lorenzo Bernini* (New York: P. Lang, 1997).
14. According to Blunt, *op. cit.*, 17, Borromini "developed his astonishing ability as an architectural draughtsman with such success that he became Maderno's most important assistant and very soon was entrusted with more than the mere making of fair copies of his master's projects." Early responsibilities included the design for the dome lantern of S. Andrea della Valle; see Frances Huemer, "Borromini and Michelangelo, III: The Dome of Sant'Andrea della Valle," *Source* 20-4 (Summer 2001): 23-29.
15. Portoghesi (1968), *op. cit.*, 31, specifies this by citing the payment record: "To Francesco Castelli 25 scudi for the present month of January for the drawings in full scale of the curvatures, the plants, mouldings, foliage, and other details that are to go on the ribs and cornices."
16. *Ibid.*, 31.
17. *Ibid.*, 31, relies for this information on the Magliabechi codex in the Laurentian Library. The manuscript, which was originally thought to be the first version of Filippo Baldinucci's biography of Borromini, is considered by Blunt, *op. cit.*, 223, to be the work of Borromini's nephew and only heir, Bernardo.
18. Both Portoghesi and Blunt refer to Heinrich Thelen's *Francesco Borromini: Die Handzeichnungen* (Graz: Akademische Druck und Verlagsanstalt, 1967) and *Zur Entstehungsgeschichte der Hochaltar-Architektur von St. Peter in Rom* (Berlin: Gebr. Mann, 1967), in which these drawings were published along with valuable information about the respective contributions made to the Baldacchino by Borromini and Bernini. See also Rudolf Wittkower, *Bernini: The Sculptor of the Roman Baroque* (London: Phaidon Press, 1997), 121.
19. See the discussion of Borromini's drawings by Frances Huemer, "Borromini and Michelangelo, IV: Inside St. Peter's," *Source* (Fall 2001) 21-1, 17-23.
20. The S-curve is taken from the spinal curvature of the dolphin, which was a traditional Lombard symbol of Christ; see Portoghesi (1968), *op. cit.*, 30. Borromini would later use this form in the lateral altars of S. Carlino, in the Landi altar in Sta. Lucia, in the clock tower of the monastery of the Filippini, in the volutes of Sta. Maria dei Sette Dolori, and in the façade of Palazzo of the Propaganda Fide.
21. Cited by Portoghesi (1968), *op. cit.*, 30.
22. *Ibid.*, 29-31.
23. The presence of Lombard architects and construction workers in Rome at the time of Borromini's arrival in 1619 is treated by Tommaso Manfredi, "Roma 1619: Architetti e maestranze al tempo dell'arrivo di Borromini," in *Francesco Borromini* (2000), *op. cit.*, 40-44.
24. Portoghesi (1968), *op. cit.*, 30, includes among others the following examples of the decorative element of the S-curve on Lombard buildings: the arch carved by Benedetto Briosco in S. Pietro e Marcellino in Milan, the crypt of the Duomo of Cremona, and the portal of Palazzo Morigi in Piacenza.
25. Gilles Deleuze, *The Fold: Leibniz and the Baroque* (Minneapolis: University of Minnesota Press, 1993), 14.
26. *Ibid.*, 14-15, describes the diagram as follows: "The first [curve] draws inflection. The second shows that no exact and unmixed figure can exist. The third marks the convex side with shadow, and thus disengages concavity and the axis of its curve, that now and again changes sides from the point of inflection."
27. *Ibid.*, 19.
28. *Ibid.*, 20.
29. Among the major studies are Patricia Waddy, *Seventeenth-Century Roman Palaces* (Cambridge: MIT Press, 1990), and Giuseppina Magnanini, *Palazzo Barberini* (Rome: Editalia, 1983).
30. See in particular Patricia Waddy, "The Design and Designers of Palazzo Barberini," *Journal of the Society of Architectural Historians* 35-3 (1976): 151-185. Lorenza Mochi Onori, *Capolavori del Settecento dalla Galleria nazionale d'arte antica di Palazzo Barberini* (Rome: De Luca, 2000), offers a history of the Palazzo Barberini and a discussion of the architects involved, including Pietro da Cortona. Cesare Brandi has underscored the unresolved nature of the specific contributions made by Borromini and Bernini in *Pietro da Cortona architetto* (Cortona: Calosci, 1978), 57-70.
31. As papal architect, Maderno was the clear choice. See, in particular, Armando Schiavo's discussion of Maderno's plans for the transformation of the Sforza palace in "Palazzo Barberini Palazzo Moroni," *Ubu* (1975) 38-3-4: 1-16.
32. See the two articles by Julia Vicinoso, "L'opera ultima e la tomba di Francesco Borromini," in *Francesco Borromini* (2000), *op. cit.*, 181-187, and "Il rinvenimento della tomba di Carlo Maderno e di Francesco Borromini," *Studi romani* 47/3-4 (July-Dec. 1999): 311-323.
33. On the influence on Borromini of Maderno's use of three-dimensional planning, see Patricia Waddy, "Maderno and Borromini, Plan and Section," in Henry A. Millon, Susan Scott Munshower, eds., *Architectural Progress in the Renaissance and Baroque: Sojourns In and Out of Italy* (University Park, PA: Pennsylvania State University, 1992), 194-223.
34. See Sebastian Schütze, "Urbano VIII e il concetto di Palazzo Barberini: Alla ricerca di un primato culturale di rinascimentale memoria," in Christoph Luitpold Frommel, Sebastian Schütze, eds., *Pietro da Cortona: Atti del convegno internazionale Roma-Firenze 12-15 novembre 1997* (Milan: Electa, 1998), 86-97.
35. According to Bernini's son and biographer, Domenico, Urban VIII "ordered him right from the outset to devote some part of his time to studying painting and architecture so as to become capable of carrying out the many projects he had in mind;" Domenico Bernini, *Vita del Cavalier G. Lorenzo Bernini* (1713), cited in Franco Borsi, *Bernini* (New York: Rizzoli, 1984), 9.
36. On Borromini's exploration in drawing of his architectural ideas, see the catalogues by Richard Bosel, Christoph Luitpold

Frommel, eds., *Borromini e l'universo barocco* (Milan: Electa, 2000), and Elisabeth Kieven, ed., *Von Bernini bis Piranesi: Römische Architekturzeichnungen des Barock* (Stuttgart: Hatje, 1993).

37. Waddy (1990), *op. cit.*, 213-217.

38. *Ibid.*, 217.

39. Critics over the course of the last three centuries have credited much of the design of the Palazzo Barberini to Bernini. This is due, Waddy suggests, *ibid.*, 241-242, to a desire to connect an extraordinary design with a famous figure as well as to a misinterpretation of papal documents and construction records.

40. Rocco Sinisgalli, *A History of the Perspective Scene From the Renaissance to the Baroque: Borromini in Four Dimensions* (Firenze: Cadmo, 2000).

41. Turning to S. Giovanni in Laterano among other examples, Christof Thoenes, "Die Formen sind in Bewegung geraten: Zum Verständnis der Architektur Borrominis," in Joseph Imorde, Fritz Neumeyer, Tristan Weddigen, eds., *Barocke Inszenierung* (Zürich: Edition Imorde, 1999), 126-135, has similarly explored Borromini's interest in temporality and movement.

42. Cf. Joseph Connors's examination of Borromini's spiral for S. Ivo alla Sapienza and related drawings in "Borromini's S. Ivo alla Sapienza: The Spiral," *Burlington Magazine* 138: 1123 (Oct. 1996): 668-682.

43. Andrea Palladio, *The Four Books of Architecture* (1570), trans. by Isaac Ware (New York: Dover, 1965), 34-35. On Palladian concepts of the spiral or elliptical stair, see Giampaolo Bordignon Favero, "Le scale ellittiche o 'a lumaca' in Casteltranco Veneto e nel suo territorio," and Elena Bassi, "La scala ovata del Palladio nei suoi precedenti e nei suoi conseguenti," *Bollettino del Centro internazionale di studi di architettura Andrea Palladio* XXII: 1 (1980): 187-194; XX (1978): 89-111.

44. Portoghesi (1968), *op. cit.*, 388.

45. Cited in *ibid.*, 2.

46. Rudolf Wittkower, "Michelangelo's Biblioteca Laurenziana," *Art Bulletin* XVI (1934): 123-218.

47. According to Stalle Sinding-Larsen, "The Laurenziana Vestibule as a Functional Solution," in William E. Wallace, ed., *Michelangelo: Selected Scholarships in English* (New York: Garland, 1995), 355-368, Michelangelo designed his staircase with specific ambulatory paths in mind. The single flight of stairs leading directly to the reading room is wide enough for people to pass by each other but too narrow for people to stop and converse. Three parallel flights with two flanking sides provide alternate ways up and down as well as landings where conversations can take place.

48. See Werner Oechslin, "Von der Treppe zum Treppenhaus: Der Aufstieg eines architektonischen Typus," *Daidalos* 9 (Sept. 1983): 42-52.

Ordering the Orders:

Claude Perrault's *Ordonnance* and the Eastern Colonnade of the Louvre

LUCIA ALLAIS

Gian Lorenzo Bernini made his exit from Paris in October 1665. He left behind three unbuilt schemes for the eastern façade of the Louvre, a disappointed King and court, and little hope that the strained relationship between the French Monarchy and the Italian Papacy could be repaired. Bernini's trip to France had been orchestrated in the name of political and architectural expediency; to the double problem of a palace without a proper façade and a diplomacy without real amicability, Bernini's talents potentially offered a single solution. One of his schemes, despite his departure, was still in the works. As it turned out, Louis XIV's ambivalence about Bernini's proposals was eventually matched by Colbert's distaste for his grandiloquence—and the extensive demolition required by the Italian's designs was seen by both as an affront to French sovereign power.¹ Colbert's response to this vexing sequence of events was, ultimately, to relieve Bernini of his obligations and to resume the search for a French solution that had, since January 1664, already yielded several different proposals. In the spring of 1667 he appointed a committee that brought together the *premier architecte* Francois Le Vau, the *premier peintre* Charles Le Brun, and the physician Claude Perrault, to propose new designs. By all accounts, this *petit conseil* executed its mandate swiftly and without much difficulty; within three months, the scheme for a colonnade with coupled columns had been proposed, authorized, and finalized. In light of the controversy that had surrounded the commission, and of the debates that the façade's coupled columns would continue to provoke long after its completion, the decisions of the *petit conseil* appear in the historical record as a rare moment of conceptual clarity in an otherwise endlessly contorted and highly politicized process. When poet Nicolas Boileau gave Le Vau sole credit for the façade in 1694—disputing the rumor that it was Perrault alone who deserved it—he triggered a centuries-long debate over the design's credits and merits.² By the end of the eighteenth century, Perrault had been canonized as both the most vocal defender of the façade and the most eager contender for its authorship, causing the façade's origins and originality to emerge as inextricably linked.³ Still today, the debate over attribution continues to animate art historical scholarship—most notably that of Robert W. Berger, who recently launched a new search to determine, with absolute certainty, whose hand was responsible for the design for the eastern façade of the Louvre—as if a controversy that had begun with Bernini's fall into disfavor needed to culminate in the naming of an alternative, yet equally singular, individual.⁴ Although this search has unearthed a considerable amount of archival material, no definitive authorship has been established, and today Perrault remains a ghost figure, the not-Bernini of the Louvre.

There is little doubt that, if the attribution of the unorthodox façade to Perrault seems attractive to us moderns, it is because Perrault elaborated an equally unorthodox theory of architecture. Most analyses of Perrault identify an affinity between his theory of architecture and the design of the Louvre colonnade by attesting to the ostensible modernity that characterizes both. Alberto Perez-Gomez puts it this way: "on the basis of Perrault's theory ... the idea for the east façade of the Louvre almost certainly seems to have originated in his radically modern and original understanding of architecture."⁵ This assertion of the "radically modern" goes on to legitimate an account that detects in Perrault's *Ordonnance des cinq espèces de colonnes selon la méthode des anciens* (1683)

clear evidence of the incursion of “modern science” into architecture, and irrefutable proof that this incursion amounted to a kind of original sin from which architecture has had to redeem itself ever since.⁶ “From our perspective,” writes Perez-Gomez in his introduction to the recent English translation of the *Ordonnance*,

grasping Perrault’s theoretical position, its complexities and contradictions, allows us an insight into the reasons underlying the impoverishment of the world of architecture; these reasons help explain the temporary loss of faith in the existence of meaning in the embodied order of the present. This has resulted in ... the seeming impossibility of reconciling the political and the symbolic or creative tasks of architecture.⁷

If Antoine Picon has noted that Perrault’s interest in architecture was marked by the “curiosity of a classical savant,” Perez-Gomez equates this curiosity with an opportunistic attempt to scientize the art of building by creating a rigorous discipline in which “creative tasks” occur as the literal application of a “theoretical position.”⁸ In other words, for Perez-Gomez it is Perrault’s desire for creative agency that forever deprived architecture of the ability to create new meanings—and the attribution of the Louvre colonnade to Perrault is indispensable in this interpretation. Ironically, the reverse argument, according to which Perrault should be robbed of authorship for the façade, seems to stem from a similar logic; namely, that a mere physician-with-a-theory is unfit to fill the void left behind by Bernini, and that this position is more adequately filled by an architect-without-a-theory like Le Vau.⁹

Yet the fact remains that the Louvre colonnade precedes Perrault’s theory of architecture by a decade, and appears repeatedly in Perrault’s writings: it is the frontispiece to his 1674 translation of Vitruvius, which also features the machines he invented for its construction; it serves as a concluding example in his 1683 *Ordonnance*; it even appears in his treatise on mechanics.¹⁰ If it is difficult to dissociate Perrault from the Louvre colonnade, then, it is because his theories seem to be structured around it, not vice-versa. Nor can the colonnade’s ubiquitous presence in the theoretical oeuvre be explained away as a strategic placement in a list of canonical examples. These engravings alternately depict the colonnade as partially hidden, as incomplete, or as under construction (Fig. 1). Never a static object, the façade is repeatedly deployed as a backdrop—starting from the left, then disappearing behind objects in the foreground, as if to suggest that its doubled rhythm could extend beyond the frame *ad infinitum*. It is not the fact of its objecthood (the doubled order as a symbol for architecture) but rather the process of constructing a system (the doubling of orders as generative of architecture) that becomes an allegory for architectural creation. In fact, by 1700 the building of the Louvre colonnade had become the analogy *par excellence* for architectural invention itself—not just in Perrault’s writings, but also in academic debates.¹¹ Whether or not he was solely responsible for its design, Perrault was the first in a long line of thinkers to deploy the Louvre façade as a generative trope in architectural discourse.

This essay proposes to revisit both Perrault’s theory of architecture and the eastern façade of the Louvre as devices for ordering the orders, which offered late baroque France a new model for thinking about authorship and authority in architecture. The doubling of columns in the Louvre façade is here discussed in the context of the proliferation of parallelisms and symmetries that pervaded French architectural culture as Perrault encountered it, and in particular as he represented it in his conceptualization of the orders. This conceptualization, it will be argued, is evident less in Perrault’s oft-cited polemical preface to the *Ordonnance* than in the semantic subtleties of his translations and the tabular system he devised to compute the proportions of the orders.

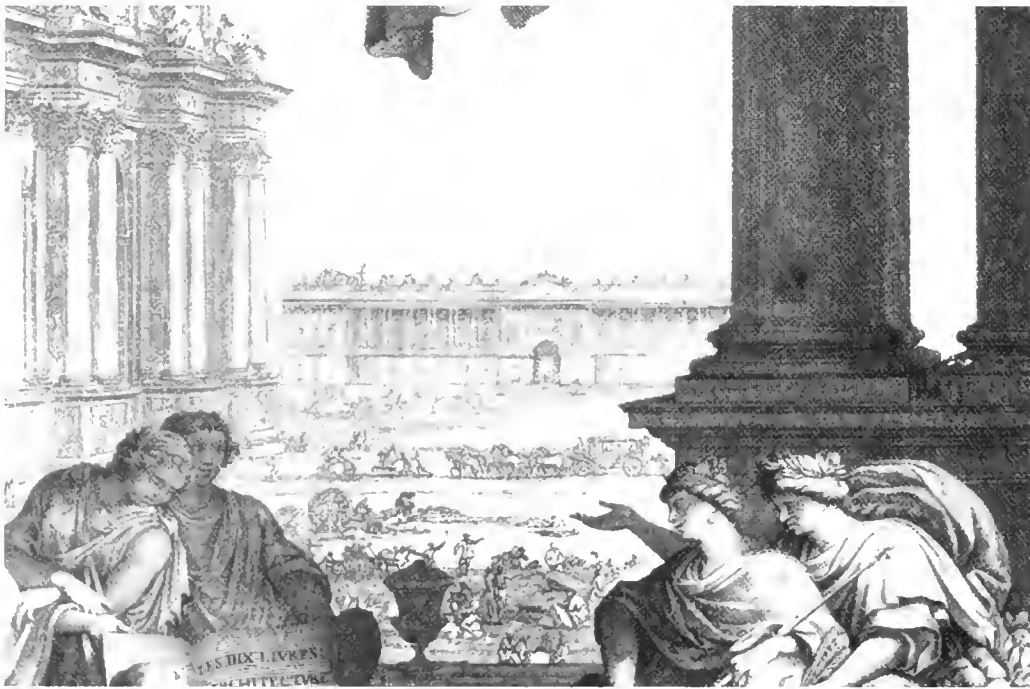


Figure 1. "Frontispiece," in Claude Perrault, *Les dix livres d'architecture de Vitruve* (1673). Engraving by Sébastien Leclerc.

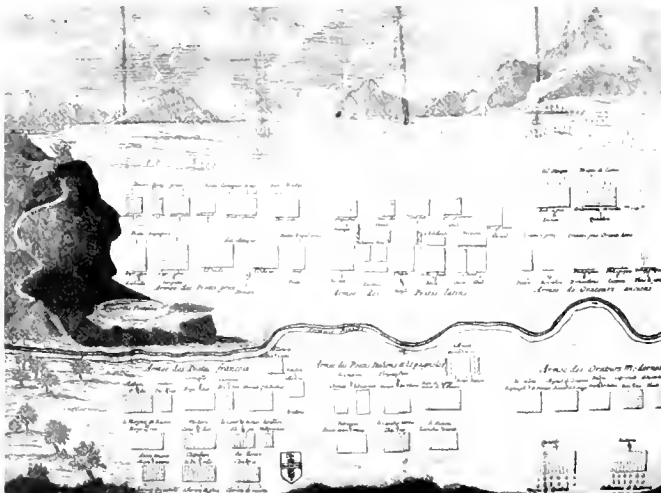


Figure 2. "The War between the Ancients and the Moderns," in François de Caillières, *Histoire poétique de la guerre nouvellement déclarée entre les anciens et les modernes* (1688).

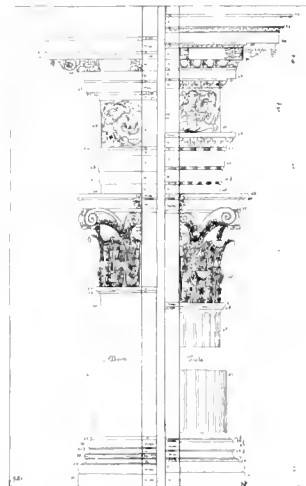


Figure 3. "The Corinthian Order of Vignola and Alberti Compared," in Roland Fréart de Chambray, *A Parallel of the Ancient Architecture with the Moderne* (1733). Engraving.

Parallels

If the Louvre colonnade stands as an allegory for architectural invention, it is only fitting that its authorship should have come into question. It was, after all, designed by a committee of three, which was convened at a time when the very nature of authorship in the arts was under debate. By the late seventeenth century, successive translations and disseminations of Vitruvius had established that modern artistic creation should stem from the imitation of ancient precedents. But the historical rationale for this debt to the past remained unclear. Was classical antiquity an unattainable ideal whose elusive perfection the moderns were striving towards? Or was it an originary state, now surpassed, whose primitive works served as the basis upon which to build and improve? In other words, did the ancients stand at the beginning or at the end of creation? This is not the place for a detailed analysis of the debates between ancients and moderns; an engraving from François de Caillières's allegorical *A Poetic History of the Recently Declared War Between the Ancients and the Moderns* is offered here as shorthand evidence that they had, by 1688, escalated into a veritable war (Fig. 2).¹² Two "armies of poets" face off across a river in defense of competing literary ideals: was one to write, converse and compose in Latin or in the vernacular? Was the historical development of language to be accepted as integral to a modern blossoming of meaning, or dismissed as a degeneration of the classical essence of thought? Judging from the engraving, by 1688 the moderns had not yet won the war but their arsenal and troops had reached critical mass. Indeed, the image is not one of dynamic conflict but of static duality, a stalemate parallelism echoing the heading under which ancients and moderns alike argued their positions in a plethora of texts entitled *Parallel of the Ancients and the Moderns*.

One such *Parallel* was written by Claude Perrault's brother Charles. Influential royal advisor, founding member of the French Academy, and writer of fables, Charles was also an unrelenting spokesman for the virtues of his brother. It was Charles who recommended that Claude be elected to the Academy of Sciences and commissioned to translate Vitruvius. It was also Charles who obtained for him a position in the *petit conseil*. And, perhaps most importantly, it was Charles who initiated the rumor that Claude alone had designed the Louvre colonnade. The Perrault brothers stood firmly on the side of the moderns, their solidarity evident even in Charles's *Parallel*, which introduced the art of architecture by making an analogy between the two brothers' domains:

Just as figures of rhetoric are available to all, and just as they offer an equal advantage to all those who desire to speak, so it is that the five orders of architecture are equally in the hands of all architects. The merit of an architect therefore is not to use columns, but to place them with judgment, and to compose beautiful buildings with them.¹³

Architecture, like language, was for Charles composed of elements whose meaning was modified by their placement in a general scheme. Echoing his involvement in language reform, Charles proclaimed architecture to be progressive—and the exemplary product of such progress was the new façade of the Louvre:

I maintain that, in the Louvre façade alone, there is more architectural beauty than in any of the buildings of the ancients. When the design for this façade was presented, ... its majestic porticos ... surprised even the eyes that had been most accustomed to beautiful things. But it was thought that its execution would be impossible, and that this design would be more properly painted in a picture, because it was only in painting that one had ever seen anything like it, rather than in the front of a real palace.¹⁴

From the parallel with language to the analogy with painting, Charles demonstrated that the progressive codification of the arts had extracted beauty from “the buildings of the ancients” and turned it into a comparative value which could pass not only from ancient to modern times, but also from “painted picture” to “real palace.” The radicality of this claim for beauty’s translatability is perhaps best evidenced by the fervor with which a competing *Parallel*, published in 1650 by Roland Fréart de Chambray, attempted to leave beauty where it was: buried deep inside the “mystery” of its classical manifestations.¹⁵

Fréart, too, was one in a pair of brothers; this pair, however, stood unequivocally on the side of the ancients.¹⁶ On the relationship between architecture and language, Fréart was clear: “the art of architecture does not consist in words.” Still, he opened his *Parallèle de l’architecture antique avec la moderne* by quoting Vitruvius’s definition of the architectural order, as if to demonstrate unconditional deference to the authority of the ancients. It was only after attempting a remarkably awkward translation (“an apt, and regular disposition of the members of a work separately; and a composition of the universal proportion to the symmetry”) that a puzzled Fréart professed that words mattered little after all:

Another peradventure, more subtle and penetrant than I am, might find out the mystery of these words, which I confess I comprehend not; and therefore it is, that I have thus translated them purely from the Latin text word for word, so that I may the more naturally propose them to those who shall desire profit by them.¹⁷

Far from an admission of incompetence, the ambition to translate Vitruvius “word for word” constitutes an homage to the tradition that had always recorded classical proportions literally from ancient monuments. Paradoxically, the reason for deferring to the “mystery” of Vitruvian words was precisely that their legacy was so stubbornly mysterious. Instead of dwelling on the word “order,” Fréart proposed a careful inventory of its “ocular manifestations” gathered from treatises since the Renaissance. In plate after plate, Fréart displayed innumerable pairs of columns drawn in parallel across an imaginary central axis—only to render their discrepancies even more obvious (Fig. 3). What Fréart offered was not simply a parallel between the ancients and the moderns but rather an endless series of parallels, a sequential permutation of unmatched pairs which seems to illustrate not that the ancients were mysterious but that all interpretations of the ancients had been mysteriously contradictory. The predicament of the architect in search of ancient authority is exemplified by Fréart’s dilemma: by his attempt to steer away from language and his compulsion to return to Vitruvius’s words; by his desire to let ancient architecture speak for itself and his vexed search for even one matching pair of proportions. Insofar as the originary text that gave architecture its figures of speech had survived without illustration, any definition of the architectural order would necessarily be a translation (whether it was made in the name of the ancients or of the moderns).

Nearly thirty years after Fréart cited Vitruvius in his introduction, Claude Perrault was commissioned to produce a new “modern” translation of the classical text. This commission prompted the quip that architecture must be very ill, if it needed a medical opinion; yet ironically it was precisely Perrault’s training as a physician that made him familiar enough with Greek and Latin to make an authoritative translation. (It is equally ironic that Fréart de Chambray owed his relative ignorance of classical languages to the “modern” and reformed education he received as a Jesuit.)¹⁸ In accordance with his erudition, Perrault appended his translation with footnotes so copious that most of the pages are divided into two halves: translated ancient text at the top, and modern explanatory footnotes at the bottom (Fig. 4). This format allowed Perrault to present two theories of architecture, literally juxtaposed one to the other, and in this sense this translation of Vitruvius constitutes Perrault’s own version of a *Parallel*.

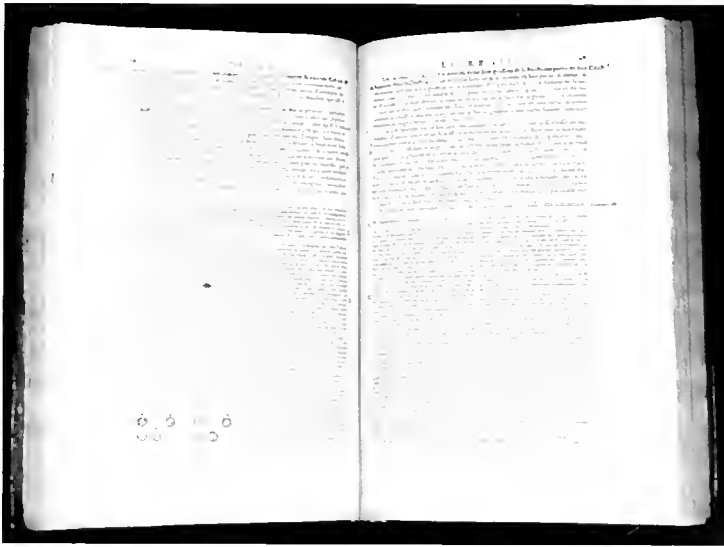


Figure 4. Claude Perrault, *Les dix livres d'architecture de Vitruve* (1673). Double-page spread.

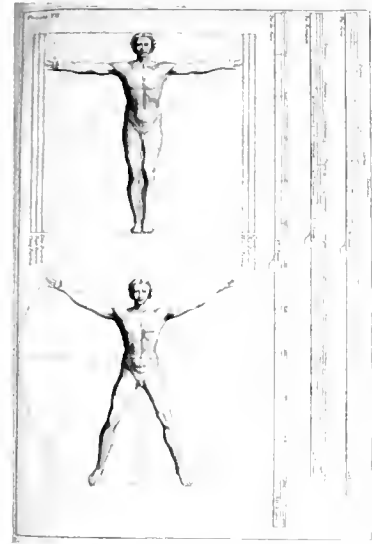


Figure 5. "The proportions of the human body," in Claude Perrault *Les dix livres d'architecture de Vitruve* (1673), Book III, Plate VII.

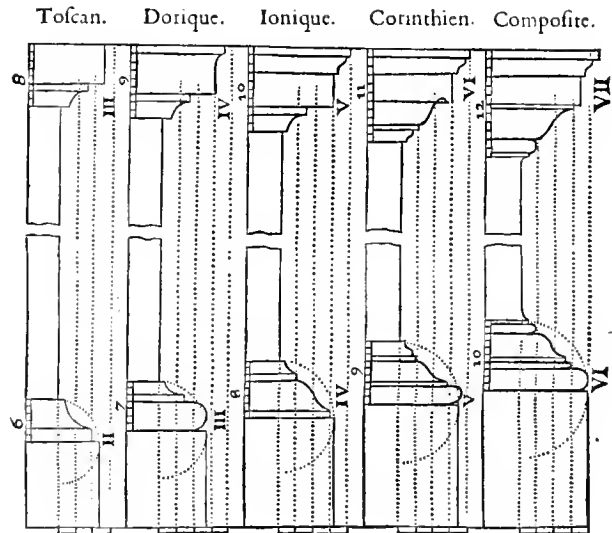


Figure 6. "The new architectural order," in Claude Perrault, *Ordonnance des cinq espèces de colonnes selon la méthode des anciens* (1683).

Vitruvius's passage on solidity, to take the most obvious example, is footnoted with drawings and legends of Perrault's modern machines. Yet Perrault did not resort to this kind of textual parallelism only to account for technological progress. On the contrary, he saw doublings everywhere in Vitruvius's text, often emphasizing dichotomies that previous editions had tried to overcome. Even the canonical figure of the Vitruvian man—whose problem of fitting the human body into a square and a circle simultaneously had famously occupied the minds and hands of architects since the Renaissance—was presented by Perrault as two separate drawings: on the one hand, the human body must fit into a square (hence Perrault drew a figure in a square); on the other hand, it must fit into a circle (hence Perrault drew a figure in a circle) (Fig. 5). Armed with a doubling lens, Perrault read Vitruvius in stereometric vision as a conflated field of textual dualities that needed to be disassociated and pulled apart.

Perhaps most importantly, Perrault made use of this doubling lens to shed light on the Vitruvian definition of the architectural order that had so perplexed Fréart de Chambray. That sentence alone is appended with five footnotes, which provide terminological clarifications on three quarters of a page. Before even translating the word "order," Perrault establishes that the Latin words for *proportion*, *symmetry*, and *relation* all appear to denote the same idea. What results is a remarkable linguistic twist whereby symmetry becomes proportion:

Although the word *proportion* exists in French, I was not able to use it to translate the word *proportio*, because, since Vitruvius uses the words *symetria* and *proportio* that mean the same thing in Latin, I had to find two words that also mean the same thing in French, which *symmetry* and *proportion* cannot do, since they mean something different, as I have already noted. This is why I thought I could translate *symetria* as *proportion*, and *proportio* as *rapport*.¹⁹

This effort to dissociate ancient words from their modern homonyms reveals an impulse to distinguish real meaning from mere resemblance. For example—and it is a significant one—Perrault erases the word "symmetry" entirely from his translation in order to avoid confusion between its ancient meaning and its modern one. There are two kinds of symmetries, Perrault explains in the previous footnote: the ancient operation, which projects the proportions of one element onto a larger one; and the modern, specifically French, operation, which reflects an element in its exact dimensions across an axis. Throughout his footnotes, Perrault repeatedly returns to the latter definition of symmetry, emphasizing every time that in modern France one can only call symmetrical those elements which are in a relationship of "parity and equality."²⁰ In the cultural context—exemplified by Roland Fréart de Chambray and François de Caillières—that consistently represented ancients and moderns as facing each other contentiously across an axis, Perrault's compulsive emphasis on symmetry must be understood less as a compositional preference and more as a new conceptual category. If ancients and moderns are truly in a state of parallelism, Perrault seems to imply, then an axis can simply be drawn between them and they can be declared to be symmetrical, and hence equal.

Orders

In his preface to the *Ordonnance*, Perrault makes this parallelism polemically explicit, famously proposing that architectural beauty consists of two separate—but, one might say, symmetrical—parts: "positive" beauty and "customary" beauty. Whereas positive beauty is a timeless value that corresponds to a viewer's natural instincts, customary beauty, by contrast, changes over time and corresponds to the caprices of fashion. This doubling of beauty has often been read as the critical index of Perrault's modernity—as a symptom of the characteristically modern propensity to make categories that artificially divide a previously homogenous order of meaning.²¹ Yet

one should avoid the equation of doubling with bifurcation, division with discord, and distinction with contradiction. Doubling, division, and distinction are just as easily equated with symmetry—thereby becoming conciliatory values as opposed to contentious ones. Perrault's own title, "The *Ordering* of the Five *Kinds* of *Columns* According to the *Method* of the Ancients" (italics mine), shows that he nested his analytical categories in a unifying scheme where modern agency and ancient authority might converge. Nowhere is this desire for convergence more evident than in the first page of the *Ordonnance*—and here, a careful examination is warranted because, even under the seemingly innocent guise of explicating Vitruvius, Perrault transforms a paralyzing confrontation into a productive device, doubling the architectural order so as to reinforce it.

Perrault opens his treatise, like so many before him, by translating Vitruvius's definition of the architectural order: "the *Ordonnance*, according to Vitruvius, is what determines the size of each of the parts of a building according to its use."²² Having thus distilled from Vitruvius's definition two elements (a building and its parts) and two attributes (size and use), Perrault then reveals that what had puzzled Fréart de Chambray was the lack of relationship between the respective pairings of element and attribute that Vitruvius mandates: size and parts (this relationship is regulated, as Vitruvius later explains, by "proportion"); and building and use (this link is regulated by "shape"). In other words, Perrault's first page exposes the mystery of the ancients: namely, that Vitruvius's definition is composed of two unrelated requirements—one concerning "proportion," the other concerning "shape"—which are conjoined by nothing more than his simultaneous enunciation of them as constitutive of "ordering." To clarify the Vitruvian approach, Perrault doubles this definition into two separate operations: on the one hand, proportion determines the parts of a column; on the other, shape determines its use. Real architectural "order," Perrault contends, will only arise when a single relationship emerges out of these two operations, accounting somehow both for the "shape of use" (such as Ionic or Doric) and the "proportions of parts" (such as architrave or capital). Perrault's explanation appears in one of the more remarkably contorted passages of his text, yet the single relationship reconciling "shape of use" and "proportion of parts" is signaled by nothing more than a rhetorically well-placed "nevertheless." He writes that although "shape might be more fitting to determining use ... nevertheless ... the most essential difference between the orders ... according to Vitruvius ... is that of proportions."²³ It is here that Perrault's invention occurs: by locating the "order" in an enigmatic "nevertheless"—a single conjunction that stands in for all of Vitruvius's authority—Perrault escapes the impasse of a bifurcated world. Proportion, ultimately, must guarantee the *unity* of the architectural order. "Hence," Perrault concludes, "the architectural order is what is regulated by the *ordonnance* when it prescribes the proportions for entire columns and determines the shape of certain parts in accordance with their different proportions."²⁴ This definition would amount to a tautology (order is that which is ordered, proportion is that which is proportioned) were it not for Perrault's simultaneous use of active and passive voices: order is that which regulates all the while being regulated. From Vitruvius's statement of a single order, Perrault extracts the requirement of a doubled structure, and it is the singularity of doubling as a *process* that becomes the bearer of architecture's unitary authority.

What Perrault retains of Vitruvius's definition of the order, in other words, is its organizational structure—its ability to order the orders. Placed at the beginning of the *Ordonnance*, the doubling device that Perrault had developed in his translation of Vitruvius's *Ten Books* becomes the conceptual basis not only for his inventory of the classical orders but also for his invention of a modern way of ordering. Having prefaced the *Ordonnance* with the startling claim that "the differences between the orders ... are the only well-established matters in architecture," Perrault proceeds to organize these "differences" into the paired categories he extracts from Vitruvius's text.²⁵ What emerges from all this is a two-dimensional structure that surfaces repeatedly: as a way to organize the

Ordonnance into two parts: as a visual device for describing the orders; and as the basis for tabulating proportions by means of a grid.

Consider, for a start, the two-part organization of the *Ordonnance*: “Part I: Qualities that are common to all the orders,” and “Part II: Qualities that differ in each order.” With all the taxonomic expertise of a member of the Académie des Sciences, Perrault structures his architectural treatise as a system of differences, a matrix that accounts for sameness as well as for distinction. Hence the division of columns into parts, which is “common to all the orders,” is as integral to architecture as the elaboration of a column’s shape, which “differs in each order.” Consider also the missing illustration of the orders from Vitruvius’s *Ten Books*, which had been reimagined since the Renaissance as a single plate of five juxtaposed columns. Here again Perrault’s two taxonomic variables—“shape” and “proportion”—can be detected in the visual structure of his illustration, which relies on two axes to dictate kind (Tuscan, Doric, Ionic, Corinthian, Composite) and part (capital, shaft, base) (Fig. 6). Perrault’s rendition of this plate is remarkably grid-like: a compact square whose dotted vertical lines provide visual continuity between column shafts. The integrity of the columns as objects has been sacrificed: they are fractured in two, made to fit under a single horizontal hang-line that compresses the profiles traditionally rising along a diagonal. Perrault’s orders are not, as they had been for so many before him, labeled objects standing autonomously on the same ground. Rather, they are dimensions drawn together into a single matrix. Accordingly, this depiction of the architectural order—which for centuries had been perpetuated by a predominantly mimetic tradition—is nothing other than a taxonomic grid classifying architecture into a system of differences: on the one hand, difference in kind (the horizontal axis); on the other hand, difference in part (the vertical axis). Perrault explains the architectural order as a two-variable system—but where his translation of Vitruvius had merely harnessed the descriptive power of symmetry, his *Ordonnance* activates the productive power of a grid. It is this same grid that Perrault later deploys in his tabulations to average out new proportions.

It is with this recurring structure in mind that we must approach Perrault’s proposal for new “probable” proportions and the accusations it earned its author for over four centuries. The narrative—from Boileau and Blondel to Perez-Gomez and Berger—according to which Perrault destroyed architectural creation insists that he was forced by his own analytical mindset to cast architectural beauty as arbitrary yet compelled by the weight of tradition to concede that beauty might be natural. This dichotomy is mapped onto Perrault’s double vocation as an architect and a scientist; hence his infamous “averaging” operation was (and continues to be) understood by his detractors as a surreptitious attempt to supplant the “natural” with the “scientific”; science trumps nature when the average of all arbitrary proportions, despite being “arbitrary,” are understood as somehow “natural.” The potential flaw in this narrative lies in its basic assumption that positive and customary beauty are necessarily contradictory, that one is “natural” and the other “scientific,” and that Perrault was caught between the two, uncertain as to his allegiance.²⁶ What I want to suggest instead is that Perrault relied on this and other dualities to resolve conflict rather than produce it, and that, therefore, he saw the two notions of beauty as symmetrical, equally implicated in the production of an architectural order that emerges as a *third* element—scientific perhaps, but no less natural nor more arbitrary for it. We moderns have projected onto Perrault our contemporary understanding of science by assuming that he imported a ready-made “scientific” tool into an otherwise “natural” practice—despite the fact that Perrault extracted both his categories from architecture’s own tradition.

Far from imposing a theory of discord onto a previously harmonious order of architecture, Perrault performed an analysis of architecture’s discordant Vitruvian legacy in order to derive a two-dimensional grid calibrated to

encompass both the authority of the ancients and the ambition of the moderns. Consider again Perrault's two most polemical claims: firstly, that "the differences between the orders ... are the only well-established matters in architecture"²⁷; and secondly, that "in architecture there is positive beauty and beauty that is only arbitrary."²⁸ Neither of these two claims was particularly new in late seventeenth-century France. Where the first is concerned, inventories like Fréart's *Parallel* had amply illustrated the differences between the proportions offered in previous treatises. The practice of measuring the orders had, further, extended beyond treatises to include ancient buildings. In the late 1670s Colbert had sent Pierre Desgodets to Rome with the explicit mandate of measuring its most famous classical monuments. Desgodets's findings, published in 1682, had only served to intensify awareness by extending the list of discrepancies to be accounted for.²⁹ There were, indeed, only differences in the architecture of the ancients. As for the two kinds of beauty, it was a common trope of the literary *Parallels*, and had begun to transcend its literary origins to inform a theory of aesthetics, notably in the work of Port Royal logician Pierre Nicole. In his 1659 *True Beauty and its Phantom*, Nicole distinguished between "real" and "false" beauty, the first "eternal," the latter "contingent," in order to propose a unifying aesthetics in which beauty was equally well-suited to "nature" and to "convention," equally attuned to the "true description of things" and to "the secret penchants of human nature."³⁰

What Perrault aimed to describe with his infamous claims was not his own theory of architecture, but rather the predicament of architecture in his time. If the architectural orders were about differences, and beauty was always two-fold, then Perrault's contribution was simply to require that these assessments intersect. He fulfilled that requirement by producing a grid in which architectural differences could be inventoried and averaged, as it were. In this grid, the horizontal axis (the axis of what Perrault called "positive beauty") traces all the differences that have remained constant in history, whereas the vertical axis (the axis of "customary beauty") gathers the differences that have changed over time. What Perrault placed into this grid were the orders collected in Fréart's *Parallel* and the buildings measured by Desgodets in Rome.³¹ For example, the "Table of Entablatures" pulls together all the relevant measurements made or proposed since antiquity (Fig. 7). This table is modeled closely on the plate of orders he devised to illustrate Vitruvius, with one significant departure: whereas the horizontal axis expectedly organizes columns by kind, the vertical axis—instead of marking the difference between base, column and capital—now distinguishes between Serlio, Palladio, Vitruvius, the Temple of Peace, the Coliseum, etc. Theorists, architects, and buildings: all are placed into the same matrix. In one fell swoop, Perrault transforms each iconic figure and each majestic building into an abstract numerical quantity, arbitrarily different from its predecessors and successors regardless of the relative weight of its historical authority. Chronology is out of the picture, supplanted by a sliding scale from "less" to "more." What Perrault proposed was not a new inventory but a new structure for an existing inventory, as a comparison of his tabulations with the table of contents of François Blondel's 1675 *Cours d'architecture enseigné dans l'académie royale d'architecture* makes clear (Fig. 8). Blondel—keeper of the architectural tradition *par excellence*—was a staunch defender of the ancients, dedicating an entire chapter to a denouncement of Perrault's heretical theory. Yet a discerning eye might examine his index of chapters and see Perrault's matrix emerging from the maniacal repetition of names, orders, and parts. It was this kind of repetition of sources that Perrault placed into his grid, and it is not difficult to imagine the effect of this ordering on the authority of the ancients.

From an undifferentiated collection of discordant sources, Perrault extracted an improbably elegant numerical progression. Where centuries of measuring had yielded only complexity and difficulty, Perrault's plate of the orders explained every proportional relationship with the paradoxical simplicity of ten roman numerals (Fig. 6).

TABLE DES ENTABLEMENS.

Toscan	Dorique	Ionique	Corinthien	Composite
minutes	minutes	minutes	minutes	minutes
Vitruve 15	Colisée 26	Temp.de la F.V. 18	T.de la Paix 8	Arc des Lions 34
Scamozzi 11	Scamozzi 27	Vignole 18	Port.de Sep. 12	Serlio 30
Vignole 15	Vitruve 15	Th. de Mar. 25	P.de Lorme 19	Vignole 30
Palladio 15	Bullant 15	Colisée 26	T.de Nerva 24	Arc de Sept. 19
Serlio 3	Serlio 13	Palladio 11	Les 3. Colon. 36	Arc de Titus 19
	Palladio 12	Serlio 13	F.de Neron 47	T. de Bacch. 2
	Vignole 10	Scamozzi 15	Scamozzi 6	Palladio 0
	Barbaro 8	De Lorme 16	Palladio 6	Scamozzi 3
	Th. de Mar 7	Vitruve 19	Vignole 12	
	De Lorme 5	Bullant 35	Serlio 14	
			Vitruve 19	
			T.de la Sib. 21	

Figure 7. "Table des Entablemens," in Claude Perrault, *Ordonnance des cinq espèces de colonnes selon la méthode des anciens* (Paris: J.B. Coignard, 1683).

LIVRE SECOND.	
CHAPITRE I. <i>De l'Ordre des Arcs suivant Vignole.</i>	p. 317
CHAP. II. <i>Arche de l'Ordre Toscan sans piedestal de Vignole.</i>	p. 318
CHAP. III. <i>Arche Toscan de Vignole avec piedestal.</i>	p. 319
CHAP. IV. <i>Arche de l'Ordre Dorique sans piedestal de Vignole.</i>	p. 320
CHAP. V. <i>Arche de l'Ordre Dorique avec piedestal de Vignole.</i>	p. 321
CHAP. VI. <i>Arche de l'Ordre Ionique sans piedestal de Vignole.</i>	p. 322
CHAP. VII. <i>Arche de l'Ordre Ionique avec piedestal de Vignole.</i>	p. 323
CHAP. VIII. <i>Arche de l'Ordre Corinthien sans piedestal de Vignole.</i>	p. 324
CHAP. IX. <i>Arche de l'Ordre Corinthien avec piedestal de Vignole.</i>	p. 325
LIVRE TROISIEME.	
CHAPITRE I. <i>De l'Ordre des Arcs et Arcades suivant Palladio.</i>	p. 331
CHAP. II. <i>Arche de l'Ordre Toscan avec piedestal de Palladio.</i>	p. 332
CHAP. III. <i>Arche de l'Ordre Dorique avec piedestal de Palladio.</i>	p. 333
CHAP. IV. <i>Arche de l'Ordre Ionique avec piedestal de Palladio.</i>	p. 334
CHAP. V. <i>Arche de l'Ordre Corinthien avec piedestal de Palladio.</i>	p. 335
CHAP. VI. <i>Arche de l'Ordre Composite avec piedestal de Palladio.</i>	p. 336
CHAP. VII. <i>Continuation de la Doctrine des Arcs suivant Palladio.</i>	p. 337
LIVRE QUATRIEME.	
CHAPITRE I. <i>Examen fait par Scamozzi des pensées des autres Architectes, sur le sujet des Arcs.</i>	p. 341
CHAP. II. <i>Regles generales de Scamozzi au sujet des Arcs.</i>	p. 342
CHAP. III. <i>Arche Toscan sans piedestal de Scamozzi.</i>	p. 343
CHAP. IV. <i>Arche Toscan avec piedestal de Scamozzi.</i>	p. 344
CHAP. V. <i>Arche Doriques sans piedestal de Scamozzi.</i>	p. 345
CHAP. VI. <i>Arche Doriques avec piedestal de Scamozzi.</i>	p. 346
CHAP. VII. <i>Arche Ioniques sans piedestal de Scamozzi.</i>	p. 347
CHAP. VIII. <i>Arche Ioniques avec piedestal de Scamozzi.</i>	p. 348
CHAP. IX. <i>Arche Composites sans piedestal de Scamozzi.</i>	p. 349
CHAP. X. <i>Arche Composites avec piedestal de Scamozzi.</i>	p. 350
CHAP. XI. <i>Arche Corinthiennes sans piedestal de Scamozzi.</i>	p. 351
CHAP. XII. <i>Arche Corinthiennes avec piedestal de Scamozzi.</i>	p. 352

Figure 8. "Des Livres et des chapitres contenus dans la quatrième partie de ce livre," in François Blondel, *Cours d'architecture enseigné dans l'Académie royale d'architecture*. (1698).

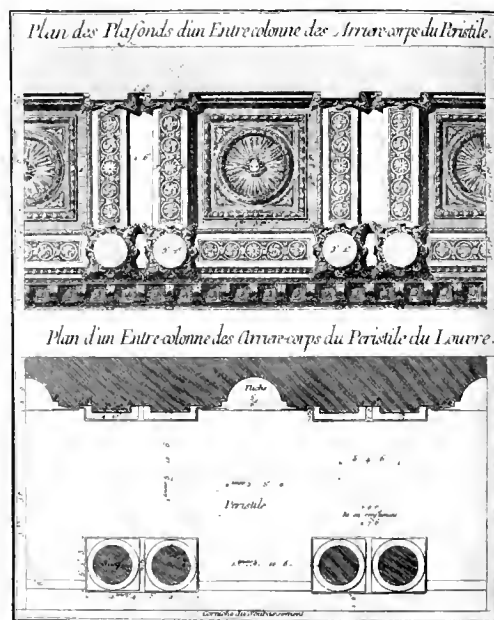


Figure 9. "Plan d'un Entre-colonne des Arrière-Corps du Péristyle du Louvre," in Pierre Patte, *Mémoire sur les objets les plus importants de l'architecture* (1769). Engraving.

In order to arrive at this simplicity, Perrault not only created a new module that transformed messy fractional entities into neat integers, but he also famously fudged his calculations.³² Blondel's version of this plate, by comparison, is littered with calculations. As a mathematician, Blondel deferred to the inscrutability of his sources, crowding his plates with numbers in the hopes that every mathematical entity might hold a meaningful key to the mystery of the ancients. Perrault's numbers, by contrast, are nothing but the means to an end—to a diagram equally well expressed in graphic or written form. Without a scale and almost devoid of numbers, Perrault's diagram of the orders is a pithy formula computed in Part I of the *Ordonnance* and reprinted five times in Part II (once for each order). If Perrault eventually proposes new proportions, it is only to conclude with an assurance that he will defer to anybody who proposes a better method of calculation. "Method" is the operative term here: the authority that emerges out of the conflict between ancients and moderns is the process of ordering itself. It is not Perrault's theory that is crippled by "complexities and contradictions" (to use Perez-Gomez's phrase). Rather, it is the Vitruvian tradition, unproblematically gathered in the legend to Perrault's plates, which lays bare all of its accumulated discrepancies by means of a new ordering device that mirrors ancients and moderns around an axis and folds them into one.

Columns

What does all this have to do with the Louvre colonnade? What is the connection between the authority of method and a façade without an author? In strictly proportional terms, the architectural order used at the Louvre is not the same as the Corinthian order proposed in the *Ordonnance* (Fig. 6). Yet mathematical discrepancy is beside the point, for Perrault's numerical elegance, as we have seen, tolerates inaccuracy. Far more important is the question posed by the doubling of columns: what are we to make of the coincidence that, in an age of endless parallels, such a visible royal commission should feature paired columns rather than single ones? To be sure, there is a technical explanation: an added column helps to support the weight and withstand the thrust of an architrave spanning unprecedented lengths. But structural necessities are only part of the answer. I would like to suggest that the doubling of columns at the Louvre projects architecture onto Paris in the same way as the *Ordonnance* projects a method of ordering onto the Vitruvian tradition. My point is not that Perrault's method has literally been embodied by a colonnade, but rather that both function as devices for ordering. They both posit a conciliatory politics—for interpreting the orders, for giving an architectural face to the monarchy—that acknowledges the authority of the ancients all the while breaking the spell of their mystery.

Symmetry is the key to understanding the colonnade's role in all of this. Symmetry is, after all, the operation that turns a single column into a pair by means of a vertical axis. Take the plate from Fréart's *Parallel* comparing Alberti's and Vignola's Corinthian order; it is the disrupted expectation of symmetry—of seeing a single column and then realizing that two different halves have been conjoined—that creates the uncanny effect of seeing double (Fig. 3). Just as a vertical axis is endlessly repeated in the plates of Fréart's text, so a vertical line can be drawn between each pair of columns at the Louvre (Fig. 1). Mapped onto the whole colonnade, this proliferation of axes of symmetry helps to explain the relentlessness of the façade and Perrault's insistence on representing it as a potentially self-perpetuating system of construction. By the same token, imagining these axes serves to shift our attention away from the columns *qua* columns and towards the space between them. This emphasis on intercolumniation, on the space in-between, leads us back to Perrault's translation of Vitruvius's *Ten Books*. It is in his explanatory footnote to the section on intercolumniation that the Louvre colonnade first appears as an exception to ancient rules.³³ To legitimize what he calls (without claiming authorship) "the invention made at

the Louvre," Perrault makes reference to Hermogenes—the only ancient architect who, in order to accommodate an entrance, had dared break the regularity of intercolumniation by slightly modifying the interval between the columns of his temples. In his footnote, Perrault draws two plans of four columns each, in a sequence that makes evident the *process* of ordering a colonnade (Fig. 4). Hence the doubling of columns at the Louvre is not the result of an addition of elements, but rather of a modulation of distances: it is not that a column is added, as the diagram in his footnote makes clear, but that every other column is displaced. Rather than pairing identical columns, the Louvre façade appears to pair non-identical intervals; for every short interval between paired columns, there is a long interval between pairs of columns. In other words, if the Louvre façade is to be understood as a system, it must be understood as a system of differences. Just as in Perrault's *Ordonnance*, what matters is not the numerical measurement of the orders (the dimension of columns), but rather the accumulated differences between them (the space between columns). In both instances, discerning the significance of the orders amounts to asking what the difference between two kinds (*espèces*) of differences might be.

Perrault's footnote on Hermogenes concludes with the decidedly modern assertion that, whereas the Ancients preferred their peristyles to have narrowly spaced columns, the French favor more generous intervals, which Perrault calls *dégagement*. This evolution of taste, Perrault argues, occurred because of *usage*, a concept that also appears in his brother's *Parallèle* in reference to the Louvre colonnade. Whereas in ancient times, Charles Perrault explains, ladies had to stop holding hands when entering temples because entrance spaces were too narrow for two bodies, modern peristyles improve on their predecessors by making accommodations for *usage*.³⁴ Hence narrow and wide intervals appear to be literal references to ancient and modern usage, respectively. And the Louvre colonnade can be understood as a serial juxtaposition of two kinds of usages: the ancient short interval, so narrow that it barely allows for the width of a single body; and the modern *dégagement*, made wide as possible through modern structural technology. The ancient interval, while remaining a reference point, only serves to underscore the amplitude of the modern *dégagement*, and the sociability it implies.

What, then, is the *usage* of *dégagement* at the Louvre? In Perrault's frontispiece to Vitruvius, we find another doubling of columns, to the left of the Louvre, in the *Arc de Triomphe du Faubourg Saint Antoine* that Perrault designed in 1667 to commemorate the royal entrance into Paris of 1660 (Fig. 1). Here the pairs of columns flank an archway intended for the passage of the King, and the resulting intervals are clearly differentiated by *usage*; short intervals between paired columns are merely appended to the wall, whereas the wider ones between pairs allows for triumphal processions. Hence the *Arc* stands as the result of a properly French ordering of columns, whereby a modern *dégagement* befits the authority of the modern King and the ancient precedent is presumably displayed for its symbolic value. At the Louvre, by contrast, the entire colonnade stands apart from the wall, and never allows for passage of any kind. From the inside of the Louvre, one can only step *into* the peristyle and look *through* it, and it is from within this space that the scene in Perrault's frontispiece to Vitruvius appears to have been composed. Here a picture of sociable architecture emerges. The allegorical figures conversing in the foreground are seated behind short and wide intervals; they are situated as if in the Louvre colonnade yet they also paradoxically face it, looking out onto a cityscape taken over by a plethora of coupled columns.

If the "invention" of the Louvre is to have detached its colonnade completely from the façade to form a peristyle, then the *usage* of this peristyle corresponds to another kind of *dégagement*: a pulling apart of one surface from another, a process that leaves traces on the wall in the form of coupled pilasters. As Pierre Patte's 1769 detailed plan shows, the space of the colonnade results from a doubling of coupled columns into coupled pilasters, a ges-

ture that seems to echo Perrault's doubling of the canonical Vitruvian figure into circle and square (Fig. 9). As a result of this gesture, every interval between pairs of columns is matched by a perpendicular interval between wall and colonnade, and the two directions of this *dégagement* are clearly marked by the circle-in-a-square ceiling scheme that hovers above it and projects geometrical order from the coffers down.

Clearly the peristyle of the Louvre is an ordered space intended to be occupied by bodies, rather than simply a composed facade whose horizontal impact is intended to be perceived from a distance. What is more, it is not a given that the body behind the colonnade is the body of the King—as a comparison with another royal residence makes clear. A similar process of *dégagement* characterizes Jules Hardouin-Mansart's *Galerie des Glaces*, which was appended to the western façade of Versailles in 1678. Here, too, the interior wall bears traces of a perforated surface that has been detached from it; the same arcuated rhythm is found on the garden façade and on the wall of mirrors that is parallel to it. Yet whereas the mirrors at Versailles serve to bring its gardens inside the palace, the wall behind the Louvre colonnade remains impermeable. Whereas the *Galerie des Glaces* looks both inward and outward to reflect the supremely ordered world of Le Nôtre's gardens, the Louvre colonnade is an ordered space that mirrors itself indefinitely, projecting outward onto the chaos of a then-still-medieval Paris. And whereas the mirrors of Versailles reflect the King as he deambulates down his hall, rendering his body into a ubiquitous presence, the peristyle of the Louvre is marked by Louis XIV's absence.

Remember that the construction of the colonnade stands in the historical record as the architectural marker of the King's departure from Paris and his transfer of the entire court to Versailles. If, in Louis Marin's words, "the King at Versailles is at once everywhere and nowhere," at the Louvre, in contrast, the King is elsewhere—at Versailles.³⁵ By the time the colonnade was completed, all that remained of the royal entourage in Paris were the scientists, the artists, the architects—in short, the academicians. To be sure, the Louvre continued to denote the absolutist authority that had created it. But the task of representing this authority was being delegated to the Academies—bearers of France's newly institutionalized scientific and artistic ambitions. Imagine therefore the Louvre, teeming with so many artists and savants who, entrusted with their national academic mandates, are charged with developing an intrinsically French view of the world. In this scheme of things, the image of the colonnade as a projective ordering device takes on added dimension. No longer an order to be contemplated from the outside, the colonnade is a space for looking out onto Paris through the eyes of an academician—a space for seeing, through the intervals of the columns (both narrow and wide, both Ancient and Modern), an entire world that has yet to be ordered. The Louvre colonnade offers not an order to be looked at, but rather an ordering device to be looked through, and what this device imposes onto Paris is the numerical elegance of taxonomy, of classification, of order.

To conclude, the passage from a contemplated single order to a sociable ordering device is vividly rendered in Charles Perrault's *Parallel*, an allegorical tale of the eclipse of the mysterious authority of the ancients. The *Parallel* is a satirical fable that follows three characters—*le Président*, *le Chevalier* and *l'Abbé*—as they travel to Versailles to discuss the merits of modern inventions and ancient accomplishments. Arriving at the question of architecture, they refer not to the château in front of their eyes, but to the royal complex in Paris. Here, the *Abbé* contends, a single column contains architecture's perfect order, meaning that all architecture should strive towards a single, ideal proportion:

Abbé: It is said that, among the columns at the *Palais des Tuileries*, there is one column which has the desired proportion. People go admire it, as if it were the only one where the architect had reached the imperceptible point of perfection. It is even said that, not long ago, an old architect had himself brought there every day, and spent two whole hours sitting in his chair, contemplating this masterpiece.

Chevalier: I am not surprised; this way he got his rest, and in a very pleasant place, too. By the same token he acquired a great reputation at a small price, since, the less one saw what could possibly be so charming in this column, the more one supposed that he had a profound understanding of the mystery of architecture.

Abbé: If those strong proportions had had natural beauty, no study would have been required to judge them.³⁶

"An old architect" immobilized for hours on end by a single column all the while "getting his rest": with what might be taken as a reference to Bernini's recent Parisian visit (he was 67 years old at the time). Charles offers a cautionary tale about the mystery of the ancients. What he goes on to argue is that "in the Louvre façade alone there is more architectural beauty than in any of the buildings of the ancients."³⁷ What this means, I want to suggest, is that the Louvre colonnade makes it impossible to contemplate a single column—a single order—since this order is, quite literally, no longer single. By ordering the orders, in other words, the Louvre colonnade breaks the mystery of the ancients just as it allows space for the consolidation of modern authority. In the end, the truly modern architect must stand behind the colonnade and watch it project ancient authority and modern invention together onto the world in a perpetually self-replicating system. It is this self-replication that ensures the emergence of a properly French order, as architecturally coherent as it is politically absolute.

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1. Our confused understanding of Bernini's stay in Paris stems from three conflicting first-hand accounts: Charles Perrault's *Mémoires de ma vie* (1669, Paris: Renouard, 1909); Paul Fréart de Chantelou's *Journal du voyage du Cavalier Bernin en France* (Paris: L. Lalane, 1885); and the transcript of a conversation between Claude Perrault and Gottfried Wilhelm von Leibniz reprinted in *Journal général de l'instruction publique et des cultes* XXVI 32 (22 Apr. 1857): 235-236.

2. Nicolas Boileau, "Réflexions critiques sur quelques passages du rheteur Longin," in *Oeuvres Complètes*, ed. by Françoise Escal (Paris: Gallimard, 1966), 495, was trying to discredit Claude Perrault as an architect: it is the design of the famous Monsieur Le Vau that was followed in the façade of the Louvre, and "it is not true that this great work of architecture, nor the observatory, nor the triumphal arch, are the work of a physician from the Faculty;" this and all subsequent translations from French are mine, unless otherwise noted.

3. For a historical account of Perrault's claim to authorship, see Wolfgang Herrmann's "The Sequel," in his *The Theory of Claude Perrault* (London: Zwemmer, 1973), 130-179.

4. In its most recent iteration, this debate took place in the pages of *Burlington Magazine* in a series of book reviews. See, for example, Christopher Tadgell, "Claude Perrault, François le Vau and the Louvre Colonnade," *Burlington Magazine* CXXII 926 (May 1980): 26-35; Robert W. Berger, "The Louvre Colonnade," in *Burlington Magazine* CXXIII 934 (Jan. 1981): 33-35; Robin Middleton, "The Palace of the Sun: The Louvre of Louis XIV," Book Review, in *Burlington Magazine* CXXXV 1087 (Oct. 1993): 70-702; and Hilary Ballon, "A Royal Passion: Louis XIV as Patron of Architecture: Book Review," *Journal of the Society of Architectural Historians* 54 (Dec. 1995): 499-500.

5. Alberto Perez-Gomez, "Introduction" to Claude Perrault, *Ordonnance for the Five Kinds of Columns after the Method of the Ancients*, trans. by Indra Kagiz McEwen (Santa Monica: Getty Center, 1993), 5.

6. Alberto Perez-Gomez, *Architecture and the Crisis of Modern Science* (Cambridge: MIT Press, 1983), offers an argument that is modeled closely on Edmund Husserl's *Crisis of the European Sciences* (1939; Evanston: Northwestern University Press, 1970), with Perrault substituting for Galileo in the historical role of a critical hinge between the pre-modern "real world given through perception" and the modern "mathematically structured world of idealities."

7. *Ordonnance*, 37.

8. See Antoine Picon, *Claude Perrault, 1613-1688, ou la curiosité d'un classique* (Paris: Picard, 1988).

9. Robert W. Berger, *A Royal Passion: Louis XIV as Patron of Architecture* (Cambridge: Cambridge University Press, 1994) 34-35, argues in favor of Le Vau, for example, by observing that the final scheme is "strikingly similar to François Le Vau's façade design of 1662-1664, strongly suggesting that the younger Le Vau's drawing, available to his brother, was used as the basic model." This argument is accompanied by a skeptical description of Perrault as a "scientist, physician and fledgling architect" whose involvement in architecture remains inexplicable apart from his "theoretical" predicament as an erudite: "we do not fully understand why Colbert appointed Claude to so important a group, perhaps Claude's interest in the writings of Vitruvius [...] may have suggested to Colbert that he possessed ancient theoretical knowledge that could be useful." See also his *The Palace of the Sun: The Louvre of Louis XIV* (University Park: Penn State University Press, 1993) and *A Royal Passion: Louis XIV as Patron of Architecture* (Cambridge: Cambridge University Press, 1994).

10. See the engravings from Claude and Charles Perrault, *Œuvres de physique et de mécanique* (Amsterdam: Chez Jean Frédéric Bernard, 1727).

11. For more on the role played by Perrault at the Académie d'Architecture, see Hilary Ballon, "Constructions of the Bourbon State: Classical Architecture in Seventeenth-Century France," in *Cultural Differentiation and Cultural Identity in the Visual Arts, Studies in the History of Art* 27, ed. by Susan J. Barnes and Walter S. Melton (Washington: National Gallery of Art, 1989), 135-148.

12. In Caillières's text, the two armies mobilize in response to a "Poem of Discord," which is quoted in its entirety, and corresponds word for word to Charles Perrault's 1687 poem *Le Siècle de Louis le Grand*. The publication of this poem is customarily taken as a historical marker for the starting of the *Querelle*. For a comprehensive resource on the debates, see H. Gillot, *La querelle des anciens et des modernes en France, de la Défense et illustration de la langue française aux Parallèles des anciens et des modernes* (Paris: Champion, 1914).

13. Charles Perrault, *Parallèle des anciens et des modernes en ce qui regarde les arts et les sciences* (Paris: 1688), 128-129.

14. *Ibid.*, 176.

15. In his *Ordonnance*, 57, Claude Perrault also used this phrase, repeatedly expressing his disbelief at "the extent to which architects make a religion of venerating ... the mystery of proportions."

16. Tréart's brother, Paul de Tréart, Sieur de Chantelou, was later enlisted to escort Bernini in France, and wrote an account of his journey contradicting Charles Perrault's *Mémoires* (see note 1).

17. Roland Tréart de Chambray, *A Parallel of Architecture both Ancient and Moderne*, trans. by John Evelyn (London: 1663), 7.

18. Picon, 137.

19. Claude Perrault, *Les dix livres d'architectures de Vitruve*, (1673, rev. 1683, Bruxelles: Mardaga, 1979), 56, n. 3. Perrault ends by acknowledging how "unfortunate" it is not to be able to translate the Latin *proportio* as the French *proportion* and, noting that Cicero had found himself in a similar predicament when translating Plato's *Timaeus* from Greek, cites him as precedent for the need to be "daring through reinvention."

20. *Ibid.*, 56 n. 2. "Since our symmetry, properly speaking, is the equality and the parity that one encounters between two opposing parts, such that if, for example.... columns are more tight on the right than on the left... we say that this is a default of symmetry." For more on the French definition of symmetry, see Werner Szambien, *Symétrie, goût, caractère: théorie et terminologie de l'architecture à l'âge classique* (Paris: Picard, 1986), 61-79; and Robin Middleton, "Symmetry: A French Obsession," *Daidalos* 15 (15 Mar. 1985): 71-81.

21. Perez-Gomez's notion of crisis is the basis for the argument about the loss of meaning. On the complexity of semantic homogeneity, see Manfredo Tafuri, "Architettura Artificiale: Claude Perrault, Sir Christopher Wren e il dibattito sul linguaggio architettonico," in *Barocco europeo, barocco italiano, barocco salentino: Congresso internazionale sul Barocco*, ed. by Pier Fausto Palumbo (Lecce: Centro di studi salentini, 1970), 375-398.

22. *Ordonnance*, 66.

23. *Ibid.*

24. *Ibid.*

25. *Ibid.*, 47.

26. Much attention has been paid to discerning whether Perrault privileges one kind of beauty over the other. As Picon, 145, has shown, Perrault argues first that arbitrary beauty (which is understood only by an informed elite) is superior to positive beauty (which can be perceived by any uneducated eye), but later grants that the *authority* accorded to positive beauty is usually superior to the one granted to arbitrary beauty.

27. *Ordonnance*, 47.

28. *Ibid.*, 53.

29. Antoine Desgodets, *Les édifices antiques de Rome, dessinés et mesurés très exactement* (Paris: Simon, 1682).

30. Pierre Nicole, *La vraie beauté et son fantôme*, ed. Béatrice Guion, (1659; Paris: Champion, 1996), 71, 103, articulates an axis of *convenance* between "things" and "people" in progressively abstract terms, from words ("Mais ce n'est pas assez que les mots conviennent aux choses, s'ils ne conviennent également à la nature humaine") to thought ("Il est assez facile de saisir comment les pensées doivent s'accorder aux choses. Mais il est en revanche beaucoup plus difficile de percevoir comment elles doivent s'accorder aux personnes.") By means of this abstraction, he arrives at a notion of "beauty" that is essentially detached from the particulars of any art form and corresponds to what Louis Marin, *La critique du discours: Sur la "Logique de port-royal" et les "Pensées" de Pascal*

(Paris: Editions de Minuit, 1975), 79-105, calls a "theory of the sign."

31. *Ordonnance*, 63, refers to Desgodets and his "discovery" of different proportions.

32. For a start, Perrault's so-called "average" proportions are not the mathematical average of a given numerical set, but rather the means between the two extreme values in the set. More to the point, Herrmann, 106-107, notes that the many typographical and mathematical mistakes that appear in Perrault's calculations demonstrate his "complete disregard for arithmetic," and "prove that these tables were made after the fact."

33. "Par l'asprete des Entrecolonnemens," *Deux Livres*, 78-79, n. 16.

34. Cf. Perrault, *Parallele*, 135.

35. Louis Marin, "Classical, Baroque: Versailles, or the Architecture of the Prince," *Yale French Studies: Baroque Topographies* 80 (1991), 180.

36. Cf. Perrault, *Parallele*, 140.

37. *Ibid.*, 176 (see also note 15).

Words and Works

Bernini's *Medusa* and the History of Art

PATRICK HAUGHEY

Eye looks on unsatisfied; ear listens ill-content. Make up your mind to detach your thoughts from the love of things seen, and let them find their centre in things invisible.

—Thomas à Kempis, *Imitation of Christ* (15th century)¹

In Rome's Capitoline Museum, a marble bust of the Medusa sits on a large pedestal (Fig. 1). The hint of drapery over the minimally indicated right shoulder seems an afterthought, and so the expressive character of the work lies in the downcast head, which is turned to the left, in the parted lips, and in the deeply furrowed brow. Although the bust does not bear the signature of its maker, it is attributed to Gian Lorenzo Bernini. This essay asks how art historians, with their "love of things seen," have discerned Bernini's hand in the work, and to what ends the discernment has been deployed.

Let us begin with the catalogue entry in Rudolph Wittkower's *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque* (1955):

[T]he Medusa is mentioned neither by Baldinucci nor by Domenico Bernini. It was first heard of when it was presented to the Museum in 1731 by Marchese Francesco Bichi. The Latin inscription, which relates this fact, says that it was by the hand of 'a very celebrated sculptor' (*celeberrimus statuarius*). Once in a public gallery, Bernini's name was soon attributed to this spectacular work and, to my knowledge, its authenticity has never been seriously doubted.²

The entry situates the bust between the historical facts of its first known appearance and the contextual evidence serving to position it within Bernini's oeuvre. Yet by linking together the notion of the "spectacular" nature of the work with its "authenticity," Wittkower's remarks regarding the bust's "public" existence are already inflected with a formal bias—one that celebrates dexterity in stone. He goes on in this laudatory manner, claiming that the surface treatment—the "technical wizardry of the serpents' bodies curling free in space"—signals the presence of Bernini's hand and lends weight to the attribution. However, he also seems disappointed that the "limpness" of the drapery and the lack of precision in the hair appear to be at odds with Bernini's signature style.³ Despite the doubt expressed here, Wittkower is reluctant to side against the attribution. Elsewhere he calls Bernini "the most brilliant artist of the seventeenth century" and perhaps he is unwilling to relegate such a "spectacular work" to the ranks of the unauthored.⁴ Furthermore, by insisting on "technical wizardry" as the link between the formal and the historical, he can find an equivalent achievement in two other works from the 1630s, thereby giving credence to the ascribed date: the bust of Thomas Baker (Victoria and Albert Museum, 1638) and the bust of Isabella Orsini (Castle Bracciano, circa 1635). For the latter work, Wittkower offers a circular, and intuitively



Figure 1. Gian Lorenzo Bernini, "Bust of Medusa," (Rome, Capitoline Museum, c.1635).



Figure 2. Profile view.

formal, reading of Bernini's hand in the sculpted face. "The Bust of the Duchess, Isabella Orsini," he writes, "was probably to a large extent carried out in the studio with the exception of the (not entirely finished) face, the handling of which bears a close affinity to the Medusa."⁵ Domenico Bernini's report that in 1637 his ill father worked on a few marble pieces in his room adds the necessary clue, allowing the formal aspects of the Medusa both to be bolstered by an assumed typological similarity to other busts and to be inserted into a heroic biography.⁶ Somewhere between the description of a work of art and the historical documents that locate the figure of the artist in time, the creative hand is discovered and art history is written. Yet is it possible to move beyond an attribution, an enthusiastic description and a reliance on a mythologized artistic temperament and life? If there is no record of the Medusa's making by a specific hand at a specific moment, and if it remains unaccompanied by letters or archival documents, how else is one to write on the subject? This paper aims to address how this question has already been posed (if not answered) and to propose that the various ways in which the Medusa has been and can be accounted for necessarily delimit its historical existence while simultaneously exposing it to potentially infinite avenues of inquiry.

Let us return to Wittkower for whom Bernini's "achievement in the field of portraiture was no less revolutionary than in that of religious imagery. It was he who created the Full Baroque portrait bust. His development towards a new conception of portraiture can be followed step by step from the very beginning of his career."⁷ Wittkower thus gives us a framework to which a history of the Medusa (or for that matter any bust by Bernini) might be anchored; he points to the type (the bust), the genre (portraiture), and a notion of artistic development (the idea of time). Indeed, by combining a temporal unfolding—"can be followed step by step from the very beginning" and therefore end "of his career"—with the categorization offered by type and genre, Wittkower suggestively links a single, isolated object to a broader art historical terrain—to a typological vocabulary shared with other works, for example, or to the hierarchy of genres eventually formalized by the French Royal Academy.⁸ In other words, a potentially limitless number of works—both the works themselves and the texts documenting their place in Baroque visual culture—can enter into the argument. Wittkower reinforces his interpretation by recognizing that in order to describe the history of the bust he must (reluctantly, perhaps) make it unfold around a narrative.⁹ But what is this narrative? What are its rhetorical components? And what do these components have to do specifically with the Medusa and its maker, Bernini?

For a preliminary answer, we can turn to a series of seventeenth-century texts that directly address the artist and his oeuvre. As Wittkower notes, "the most important sources for Bernini's life and work are, first, the contemporary biographies by Baldinucci and Domenico Bernini and, in addition, the *Sieur Chantelou's* trustworthy record of Bernini's stay in Paris."¹⁰ These primary sources attest to Bernini's historical presence and establish a datum that all subsequent art histories must acknowledge. For our purposes, then, the proximity of such sources to the artist constitutes a set of authentic references whose reliability goes unquestioned: we derive from them a basic biographical narrative; and we record through them the existence of a body of works executed at specific times and places, under particular circumstances, and as part of an artist-patron relationship. Yet when we return to Wittkower's entry on the Medusa, it is precisely the inadequacy of the primary sources that presents the problem (although the lack of specific mention here works less to signal a limit to knowledge than to announce a beginning for inquiry). In this case, the absent primary connection is too great to ignore, and so it rhetorically prompts Wittkower's history of art. Relying on known works and texts, and inspired by both his admiration for the heroic artist and his own formal knowledge, he reads the trademark signs of the artist's hand as well as the stylistic transformations over time that describe a way of carving physiognomies: "The polished face, which shows close

analogies to that of Isabella Orsini, is contrasted with the weighty crown of snakes in a way that is reminiscent of Thomas Baker, who is similarly smothered in hair."¹¹ Such connections rest on a deeply visual understanding of Baroque portraiture, and thus an array of typologically similar objects—from the aforementioned busts of Isabella Orsini to Thomas Baker and, eventually, to those of Constanza Bonarelli (Museo Nazionale del Bargello, Florence, circa 1635) and Louis XIV (Versailles, 1665)—is assembled around the bust of the Medusa.¹² Thus formal similitude replaces the primary texts that are found wanting only to reinforce the generally accepted date of circa 1635.

Of course, the gap between image and text means that one must assume as correct both the attribution of the Medusa to Bernini and the date in question. In this way, Wittkower subsumes the biographical story of the artist and the material product of his labor under the visual history that situates the work. As the single capitalized word BERNINI on the cover and spine of Wittkower's book perhaps reveals, the name alone assumes a great responsibility. Our question reasserts itself: What is the relationship between, on the one hand, Bernini scholarship, and, on the other, a work of essentially unknown authorship? Can or should the unattributable ever escape the historian's desire for the authenticating hand?

Other Berninis

Perhaps these are questions that need to be asked of historians other than Wittkower. There are, after all, numerous large format monographs similarly entitled BERNINI. Take Charles Avery who, in *Bernini: Genius of the Baroque* (1997), sees no need to doubt the formal similarities spotted by Wittkower among Bernini's portrait busts. He is willing to go even further, wondering if the Medusa might not also be a portrait of Costanza Bonarelli carved by the enraged and lovestruck artist. Avery recounts Costanza's story in order to argue that the bust of the Medusa might be read as an amorous and conflicted gesture of creation:

Costanza Bonarelli, very much a creature of flesh and blood, was carved around 1637-8. The wife of a studio assistant who joined the equipe around 1636, this evidently vivacious and well-endowed young woman became Bernini's mistress as well as his model ... but their prolonged affair ... came to grief with violence ignobly offered by Bernini to Costanza.¹³

Sculpture, in short, is a biographical act. What this suggests, for Avery, is that the look of sorrow and pain on the Medusa's face might "be a reflection of [Bernini's] own turbulent emotions" as the artist was "prone to use allegorical sculpture as a release for his own feelings ..." Avery, then, sees the depiction of the Medusa not only as Costanza, but as a mediated representation of Bernini's own rage and revenge—with the "look of sorrow and pain" serving to reflect his conflicting emotions. Avery supports his interpretation by referring to two earlier works: *Anima Beata* and *Anima Dannata* (or *Blessed Soul* and *Damned Soul*, Rome, Palazzo di Spagna, circa 1620), the latter of which is a self-portrait. The dichotomy suggested by these figures is conflated, for Avery, in the countenance of the Medusa: the artist's features are transferred onto his beloved's face in a peculiar transvesticism that bears the weight of one of mythology's most pervasive figures.¹⁴ The tragic romance told by Avery makes apparent a tendency to use stories as a means of conflating what are otherwise different methodological maneuvers: formal analysis and iconographic interpretations of myth. First, there is the psychologized reading of expressive suffering chiseled into the face. And second, there is a reading of the snakes as a direct and unproblematic signifier of the Medusa myth.¹⁵ As Perseus achieved victory by severing Medusa's head from her body, the art historian, it seems, must disengage the hair from the face, ignoring the body entirely.

This approach is repeated by Irving Lavin, albeit to different ends and with far more subtlety. Lavin argues, in *Bernini and the Unity of the Visual Arts* (1980), that the sculptor might have been the first to conceive of all the visual arts (sculpture, painting, architecture) as *un bel composto*—a phrase he pulls directly from the biographies by Baldinucci and Domenico Bernini to explain the visual dynamics of the *Ecstasy of St. Theresa* (Cappella Cornaro, Santa Maria della Vittoria, Rome, 1647-52) and its setting.¹⁶ Lavin uses the initial notion of “a beautiful whole” to offer a far more intriguing, if slightly contradictory reading of Bernini’s Medusa. In a recent essay, he marshals the Renaissance concept of the *paragone* to suggest that if the Medusa is indeed by Bernini, and if it is an act of self-portraiture, then it is an ironic act that served a rhetorical and moral purpose at a specific period of the artist’s life.¹⁷ Lavin’s central thesis—that Bernini’s Medusa is a sort of visual pun—relies on the relationship between various forms of evidence, including Bernini’s response to major works of antiquity, a tradition of Italian madrigal poetry, and relevant artistic examples.¹⁸ In order to demonstrate this relationship, he begins by citing Bernini’s account of the *Laocoön* and the *Pasquino*: “[They are] all the best of art, since one sees in them all that is most perfect reproduced without the affectation of art.”¹⁹ With mimesis thus celebrated in heroic terms, Lavin notes that Bernini’s admiration for expressive content or “overblown visual rhetoric” (the “intelligence” of the paralyzed leg, the emotive power of the faces, etc.) reinforces an understanding of art’s interpretation of nature as idealized rather than imitative. The *Laocoön* for Bernini, Lavin writes, “comprised all the good in art because it reflected all the most perfect in nature.”²⁰ Sculpture, then, has the power to reveal nature at its “most perfect.”

The *rigor mortis* of the *Laocoön* leads Lavin to his second example: the Farnese Gallery’s *Combat of Phineus and Perseus* (1597-1601) whose painter, Annibale Carracci, “manipulated the heritage of antiquity with grandiose artificiality in order to demonstrate the power of art to obliterate the distinction between fact and fiction.”²¹ In Carracci’s painting, Phineus is slain not by Perseus’s sword but by the Medusa’s head that he wields; Phineus falls helplessly to his knees only to find himself in a state of petrification from the waist down: “the putatively heroic remnant of the classical sculptor’s art thus embodies one of antiquity’s notorious cowards!” Likewise the skirmish is an artistic one in which Carracci put forth the claim that painting can recreate a transformation that “words can only describe and sculpture can only recall.”²² It is likely that Bernini knew this piece well, and thus Lavin has set the stage for the sculptor to respond with a work of his own that reifies his views expressed already (in words) with regards to the *Laocoön*. Furthermore, Lavin’s attempt to redeem Bernini and along with him, sculpture more generally, is thus implicated in the restoration of the art historian’s craft: the written response to the object.

Carracci’s depiction of Perseus rescuing Andromeda and slaying Phineus allows Lavin not only to summon the *paragone*, but to include Bernini’s bust in a more standardized mythic depiction of the Medusa as beheaded and bleeding from the neck (as, for example, in Benvenuto Cellini’s *Perseus* (1545-54), which stands in the Loggia dei Lanzi as a warning to Florence’s enemies).²³ Like the head of the Medusa held by Perseus’s outstretched arm, Bernini’s virtuoso rendering of the marble surface—“the powerfully expressive physiognomy ... the fragile locks, twisted, perforated and daringly suspended in space”—portrays the Medusa as both monstrous and beautiful with violent snakes framing a comely face.²⁴ Unlike Avery, who is content to marry surface handling and psychologized narrative, Lavin claims that the “deep pathos” is *not* psychological—signaling a torturous affair—but rather moral and political. He abandons both the Costanza affair and the Domenico trope in order to highlight a subsequent event in the artist’s life. With the ascension of Innocent X to the papacy, Bernini fell into disfavor in the 1640s, losing the patronage of Pope Urban VIII. In the context established by Lavin by means of Carracci and Cellini, where the art object can represent the artist and his craft in the court of public opinion, Bernini in-

tended for the Medusa to bear witness to his superior ability to hold a mirror to “human nature in its most terrific aspect.” Lavin adds a twist to his earlier examples, in which the Medusa story doubly represents stunning triumph and stunned defeat, by suggesting that, along with *Truth Unveiled by Time* (Borghese Gallery, Rome, 1645-52), the bust was meant to stand silently in virtuoso defiance of his blind detractors.

What seals Lavin’s reading is that Bernini’s Medusa is not a severed head, but a bust: “... not a transformation of the mortal apotropaion as such, but a portrait of the ‘living’ monster.”²⁵ To this he adds the idea that the Medusa could petrify herself “by gazing into the reflective chisel of the sculptor, whose virtue lies in mirroring the truth in stone with all the vividness of life.” Contemporary poets, such as Luigi Grotto and Giambattista Marino who wrote the famous madrigal on the shield painted by Caravaggio, lend considerable credence to this interpretation.²⁶ Yet all this impressive evidentiary weight—the *paragone*, the biographical incidents, the artistic context, and the insight that we are dealing with a portrait bust of a “living monster”—is used by Lavin to make a relatively minor adjustment to the historical record: the bust does not date from circa 1635, he says, but from the 1640s thus coinciding with Bernini’s fall into papal disfavor. Hence Lavin allies himself with other art historians in a battle against Wittkower’s ascribed date. Differences in sources and conclusions notwithstanding, Lavin’s method is not all that different from that of a Wittkower or an Avery: an admiration for technical skill bolsters a reading of artistic intention derived from an array of comparable works, and is used as part of a biographical narrative in pursuit of temporal exactitude.

Other Medusas

Before resigning ourselves to the art historian’s singularly focused gaze (which searches for the temporal origins of making), let us explore further the artist’s relationship to the notion of a self-petrifying subject by considering the psychologization of the Medusa, Caravaggio’s radical portrayal on the Medici shield and the broader implications of portraiture for representations of the “living monster.” If the physical aspect of the Medusa is necessarily unrepresentable because to see her—especially for the purpose of rendering her likeness—is to be destroyed, then, in theory at least, the Medusa as a model/sitter is simply an impossibility.²⁷ The thematic implications are complex: transmutation (flesh to stone) might be read as petrification just as easily as it might be read as portrayal, but does reading the subject of the Medusa in this way place the artist at risk? We must consider the obvious: that Medusa (or even, in this case, for all we know, Costanza) never sat for the sculptor who carved this bust, and that the art historian is confronted with not only the absence of a known artist, but also the absence of a (biographical) model to which the physiognomy carved in stone might be connected. Who, then, is Medusa, and why is she the ultimate apotropaion?

For better or for worse, the Medusa as the apotropaic subject par excellence cannot seem to escape Sigmund Freud’s “Medusa’s Head.”²⁸ Freud claimed that the Medusa myth represents phallic lack and reveals a deep-seated fear of castration. The head of the Medusa is explicitly linked to the female sex, the “horrifying” vision of which can only be countered with a defiant speech act of phallic presence: “I defy you. I have a penis.” Freud’s essay makes three significant moves often echoed by art historians addressing the pictorial subject of the Medusa. The first—castration-as-decapitation—must stake its claim on the narrative moment of her death; she must be beheaded to take possession of the “terror” she inspires. The second—snakes-as-phallus—reveals Freud’s reliance on the iconographically standardized representation of her hair, where similitude equates serpent and male genitalia. The third—the sight of her head—conflates three ostensibly terrifying moments into one moment of vision: the originary blinding of a boy at the sight of his mother (a “universal” phenomenon and not part of the

myth *per se*), the petrifying power of the Medusa prior to her death, and the unassailable gaze of her decapitated head which, once severed, becomes ornament.²⁹

The point to be made with this brief synthesis of Freud's all-to-familiar claims is that they serve as the foundation for the art historical notion—underlying (overtly or not) the readings offered by Avery and Lavin—that petrifying power lies in the Medusa's gaze rather than in the viewer's gaze. The result is an unwitting deflection away from an interpretation of the bust as a bust and towards an interpretation that relies exclusively on information necessarily external to a work lacking absolutely certifiable authorship: simply put, artistic biography is made powerful only because it mirrors, by means of the work of art, the Medusa myth. It becomes impossible to see the object (Wittkower's formalism notwithstanding) without refracting interpretation itself through mythological narrative and its attendant psychological model. Here, it is useful to turn to Hélène Cixous, whose repudiation of the Freudian paradigm—and the conflation it performs in order to describe the "symbol of horror"—lies in her emphasis on viewing the beautiful woman rather than on fearing the ugly totemic potency of the object: "[Y]ou only have to look at the Medusa straight on to see her. And she's not deadly, she's beautiful and she's laughing."³⁰ Cixous's point has more than little merit in the context of portraiture, and she is not alone in making the call to challenge the dominance of the petrifying gaze in Medusa literature. One need only read Christine de Pizan's *The Book of the City of Ladies* (1405), which offers a simple telling of the story. Pizan's Medusa is celebrated for the "supernatural" beauty of her hair, face and body.³¹ Finding the Medusa's allure in her whole body, Pizan has displaced petrifying power from her gaze to that of the male beholder who seeks to possess her. We are led to conclude, then, that confusion on the part of art historians lies in the fact that they admire beauty in an actual work of art (in a face manifested and body implied by a sculpted portrait bust) yet feel the need to refract their gaze through the ugly emphasized by dominant readings of the Medusa myth—only to encounter their own fears concerning a (frighteningly?) absent artist and a (frighteningly?) unrepresentable model. They don't, as Cixous puts it, look straight on.

The problem of the deviated gaze brings us to Louis Marin's Caravaggio. Marin brings a theorization of representational narrative to bear on Baroque art in general, and on Medusa portraiture in particular.³² The nature of that portraiture (the representation of the unrepresentable) and the problem of the static two-dimensional translation of the dynamic three-dimensional world all come together in Marin's complex reading of Caravaggio's painted shield. The portrait is both Caravaggio and Medusa, thereby conflating the gaze of the viewer/artist and that of the object seen (pointing to the problem explored by Cixous and Pizan). On the one hand, the artist paints himself as Medusa and thus the weight of mythology is brought to bear on art history's psychoanalyzed Caravaggio (perhaps the painter sympathized with Pindar's characterization of the victim of "[t]hat son of Danāe who raped the head / Of fair-cheeked Medusa").³³ On the other hand, it could also be said that he lent his likeness as a model for Medusa. Here, Marin further thematizes the problem of the unrepresentable; for Caravaggio, not unlike Freud, has collapsed separate narrative moments into a single image. Wearing an expression of fear and horror—an expression otherwise worn by those who gaze upon her—she is shown in the moment immediately preceding a death caused by Perseus's blow. Yet, as the blood graphically streaming from her neck illustrates, she has at this point already been slain and the Gorgon's power is now in fact in the hands of the shield-bearer. Duke Ferdinand de Medici of Tuscany, endowed, by way of Cardinal del Monte's gift, with Caravaggio's painted shield, hence becomes Agamemnon, whose own shield was said to be adorned with "the blank-eyed face of the Gorgon with her stare of horror, and Fear was inscribed upon it, and Terror."³⁴ For Marin, the thematic peculiarity of the Medusa lies not so much in our inability to see her without recourse to reflection—Perseus's polished shield—as

in the simultaneous depiction by Caravaggio of multiple narrative moments that reside in the “slashing of the subject: the painter’s brushstroke, the stroke of Perseus’s sword.”³⁵ Marin pinpoints the moments preceding and following a mythic death and, in so doing, underscores how Caravaggio’s painted shield circumvents a temporal impossibility by means of a discrepancy between the real and its representation—a discrepancy made manifest by the art of painting. To put it another way: in this case, the paradox of the painting’s narrative content is inextricably linked to the imaginative leap the artist must make in order to bridge the gap between the three-dimensional object and its two-dimensional reconstruction on a convex surface. Yet the sculpted bust is neither painted (that is, two-dimensional) nor has the head of the Medusa here been rendered screaming and severed from her body. As mentioned earlier, she has been carved as if from life, head attached to a body implied by the contour of the neckline, the clavicle, and the hint of drapery. The work, in short, specifically codes its subject as *portrait*.

For Erica Harth, the portrait is more than a representation of a being. It is an act of verisimilitude that serves a mnemonic function—one that restores the dead to life or, rather, to the living by means of semblance: a mimetic resurrection without God’s intervention.³⁶ By emphasizing its ties to memory, Harth conflates portraiture with history, a maneuver that allows her to subsequently divide the genre into genealogical and mythological types. This prompts us to wonder whether the Medusa has been resurrected by her marble portrait or whether, in fact, the opposite is true: that she has been permanently annihilated and turned to stone by Lavin’s “reflective chisel” in such a way as to divest her of any petrifying power. To consider the implications of Harth’s arguments about portraiture as genre is to suggest that the bust of the Medusa commemorates its subject by bringing it back to historical life. This is the genealogical argument. However, if the bust is seen simultaneously as a portrait of Bernini (whether ironically as with Lavin or allegorically as with Avery), then portraiture itself becomes a purposeful confusion of mythology and genealogy. As soon as Bernini’s name comes to the fore, the bust can no longer function as a portrait of the Medusa. This, in fact, is necessarily a contradiction in terms: the “living monster” becomes the mythical monster only to be folded back into history, signaling a known event in the artist’s life. Is the bust, then, simply a genealogical portrait of Bernini (or his mistress, in which case it is also a psychologized portrait)? Or, more precisely, is Bernini offering up a genealogical model for the Medusa myth (as with Caravaggio)? Are we, finally, to take the Medusa myth as a mythology of art? Only after semblance is discovered—either on the basis of style or connections to an admittedly vague biographical record (Domenico’s allusion to a few marble pieces made during illness or Chantelou’s retelling of Bernini’s artistic opinions)—can the Medusa myth and the Bernini biography be brought together, however precariously, to create a history of art. Once this move is made, then the bust is ultimately neither a portrait of Bernini nor a depiction of the Medusa but a portrait (or a still life, as it were) of technical virtuosity itself, resurrected in advance of both artist and subject.

Playing at Metamorphosis

Wittkower writes in his description of the bust of the Medusa that “the play with transitions between the hair and the snakes [is] an ingenious interpretation of Ovid’s text.”³⁷ The “play” Wittkower refers to here can be discerned, for example, in the stray curls near the cheek that are in the process of becoming a pair of snakes biting each other. He seems torn, as he seeks to make his attribution, between this “ingenious” move and the perceived “wooly quality” of tendrils that otherwise differ from the master’s “precise sense of form”—and it is this formal disjunction that leads him to look for visual clues and references in other busts. Yet one is left to wonder what it might mean to attend to the disjunction—especially when Ovid’s text is brought in to supplement the attribution of the bust to Bernini.

Given the iconographic importance of Ovid's *Metamorphosis* during the Renaissance and Baroque, it is worth citing the passage in which Perseus, after slaying Medusa, recounts for his audience the monster's tragic origins:³⁸

Her beauty was far-famed, the jealous hope
Of many a suitor, and of all her charms
Her hair was the loveliest; so I was told
By one who claimed to have seen her. She, it is said
Was violated in Minerva's shrine
By Ocean's lord. Jove's daughter turned away
And covered with her shield her virgin eyes,
And then for fitting punishment transformed
The Gorgon's lovely hair to loathsome snakes.³⁹

When read against the bust, Ovid's evocation of "lovely hair to loathsome snakes" is not merely an example of the metamorphic trope celebrated in his poetic text. For it calls attention to a very careful carving of Medusa's locks that takes us away from biographical interpretations. Compare the work to, for example, Bernini's bronze bust of Duke Paolo Giordano Orsini (Castello Bracciano, circa 1635) on whose breastplate a menacing Medusa appears with snakes fully formed, sprouting directly from the head, and a fanged mouth screaming angrily. The latter is markedly different from the bust of the Medusa in which the metamorphic—the moment of transition suspended in time—is accentuated by means of the intermingling of snakes and locks. The snakes, furthermore, are in a highly active and individually sentient state: they bite each other or arch their necks as if to strike (Fig. 2, Pl. 9). Some have fully formed bodies while others have barely emerged from the maze of tresses that, in some areas, remains unaffected (specifically towards the back). Metamorphosis is represented in such a way as to point—and this is key—exactly not to the petrifying gaze, to Perseus and his sword, or to the Gorgon's slaying. Rather they summon an earlier moment: the moment of Medusa's *own* metamorphosis, her birth into legend as told by Perseus in Ovid. This, in other words, is arguably Medusa subjected to Minerva's punishment and experiencing the transformation of attractive beauty into repellent monstrosity.

Bernini or not, this artist has rendered in stone Neptune's lovely and violated victim. That she has not yet become the totemic Medusa is evident as much by the pained expression—caused both by the snake bites and the goddess's wrath—that mars her youthful features as by the immanent apotropaic identity announced by writhing serpents. The metamorphosis begins at the ends of the hair and moves in towards the body, transforming girl into monster and inaugurating myth. Her subsequent demise at the hands of Perseus who then recounts the Medusa's origins in verse serves, in Ovid and in the bust, to resurrect the beautiful girl and restore her countenance to collective memory. In retrospect, Ovid's passage offers a metaphorical parallel to the sculptor's own task as he works from the outside to transform a rough block of marble into representation. In this scheme, the artist who exerts his inexorable will on form is Minerva and not Medusa. And if the artist is indeed Bernini, and Medusa, Costanza, then Bernini is at once the violating Neptune and the vengeful Minerva—disfiguring his mistress by transforming her into art.

Biography or myth? The interpretive impasse would seem to signal the art historian's refusal to, as Paul de Man once wrote, "distinguish between experience and the representation of experience."⁴⁰ It is, of course, entirely probable that the bust is by Bernini (and maybe a self-portrait) as Wittkower, Lavin and Avery maintain. But one should recognize the circularity of such arguments; art history finds a suitable Medusa to metamorphose into

the appropriate Bernini or sees the bust as emblem of masterly touch only by symbolically discerning Bernini's hand by virtue of the Medusa's mythic conflict. In the same manner that the artist must violate the real in order to achieve representation, the art historian who seeks to describe that achievement—be it mythical or biographical—is forever confounded by the object that gives shape to the narrative. To what extent the bust of the Medusa finds its place in the Bernini narrative seemingly depends on the projected reflection of the art historian whose desire for semantic resolution and textual clarity stems from a “love of things seen” yet endlessly finds its “centre in things invisible.”

1. Ronald Knox and Michael Oakley, trans., *Imitation of Christ* (New York: Sheed and Ward, 1967), 1:1.5. This is an adaptation of Ecclesiastes 1:8.

2. Rudolf Wittkower, *Gian Lorenzo Bernini* (1955, London: Phaidon, 2000), 259-260. Domenico Bernini (1657-1723) was the sculptor's son and, later, his biographer. He published *Vita del Cavalier Gio Lorenzo Bernino descritta da Domenico Bernino suo figlio* in 1713. Filippo Baldinucci (1625-1696) was curator and librarian for the Medici as well as a writer and an amateur draftsman. His *Vita del Cavalier Gian Lorenzo Bernini* (1682)—one of several artists' biographies that he wrote—was commissioned by Queen Christina of Sweden during her exile in Italy. The texts by Filippo Baldinucci and Domenico Bernini, along with Paul Frenet de Chantelou's *Diary of Cavaliere Bernini's Visit to France* written circa 1665, are generally considered the most authoritative primary sources for authenticating Bernini's oeuvre.

3. Howard Hibbard, *Bernini* (1965, New York: Penguin Books, 1995), 99, similarly observes that, when compared with the bust of Cardinal Borghese (Galleria Borghese, 1632), the bust of Duke Paolo Giordano Orsini (Castello Bracciano, circa 1635) “looks distinctly unfinished; we can almost consider the bust a marble sketch. Forms are generalized; the wonderfully tousled hair is given a generic treatment that bespeaks haste on the part of the master rather than the careful execution by a pupil.” For Hibbard, the unfinished state at first points to a questionable Bernini. In the final estimation, however, when Hibbard considers the unfinished body (and not the face) he concludes that “in this section we are surely dealing with the work of an assistant.” The idea of crudity is used by Hibbard to either underscore the willful abstraction by the master or to dismiss a piece as the work of an assistant.

4. Rudolf Wittkower and Irma B. Jaffe, eds., *Baroque Art: The Jesuit Contribution* (New York: Fordham University Press, 1972), 11.

5. Wittkower (2000), *op cit.*, 256-259. In other words, he ascribes authorship by comparing the bust of the Medusa to the bust of Isabella Orsini, then compares the bust of Isabella Orsini to the bust of the Medusa in order to divine a formal “affinity.” Interestingly, the bust of Isabella Orsini is also not mentioned by Baldinucci.

6. Domenico Bernini, *Vita del Cavalier Gio Lorenzo Bernini* (Ann Arbor, MI: authorized facsimile of 1717 text by University Microfilms, 1972), 49. Domenico's report is indicative of the type of statement art historians can use to attribute previously unassigned or misassigned works to Bernini. Wittkower (2000), *op cit.*, 5, has a justified admiration for the myth of the heroic artist: “The greater the artist, the more personal is his manner and, as a rule, the greater is the impact that he makes.” See also Rudolf and Margot Wittkower, *Born Under Saturn* (New York: Random House, 1969), 18, 68, for a description of Bernini's grandiose manner and his studio. On the biographical model in art history, see Ernst Kris and Otto Kurz, *Legend, Myth and Magic in the Image of the Artist* (New Haven: Yale University Press, 1979).

7. Wittkower (2000), *op cit.*, 88.

8. See Paul Oskar Kristeller, *Renaissance Thought II: Papers on Humanism and the Arts* (New York: Harper & Row, 1965), 163-227.

9. As Wittkower (2000), *op cit.*, 9, puts it: “I have chosen a systematic arrangement . . . aimed at an exposition of the principles of his art rather than at a biographical narrative.”

10. *Ibid.*, 230.

11. *Ibid.*, 89.

12. Hibbard, *op cit.*, 96-98. Hibbard notes that Bernini most likely only finished the face and part of the hair before Pope Urban VIII forbade him from completing the bust of Thomas Baker (Victoria and Albert Museum, circa 1638). It was most likely completed by his assistant, Bolgi. See also John Pope-Hennessy's *Catalogue of Italian Sculpture in the Victoria and Albert Museum* (London: H. M. Stationary Off., 1964) for a more detailed account.

13. Charles Avery, *Bernini: Genius of the Baroque* (London: Thames and Hudson, 1997), 91-92.

14. Cf. the arguments of E. H. Gombrich, “The Mask and the Face” in *The Image and the Eye* (Ithaca, NY: Cornell University Press, 1982). Gombrich distinguishes between what Petrarca calls *aria* (or “a certain shadow, or what our painters call the aria, reminds us of the father as soon as we see the son, even though, if the matter were put to measurement, all parts would be found different”) and *tonus* (which is a transformation of identity not through accoutrement or disguise but through affected expression and body). Read this way, it is the *tonus* that reveals Costanza underneath the accoutrement of the Medusa's snakes—but only because, for Avery it seems, Medusa herself is the *aria* of conflict and turbulence.

15. The iconographic legacy of the Medusa reaches back to (and past) Homer's *Iliad* (5.741-2): “And thereon is set the head of the grim

- gigantic Gorgon, a thing of fear and horror, portent of Zeus of the aegis." The *gorgoneion* of the ancient Greeks appeared on shields, altars, chimneys and everyday devices such as the drinking *kylix*. See Rainer Mack, "Facing Down Medusa" in *Art History* 25.5 (Nov. 2002): 571-604. As Patricia Klundienst Joplin, "The Voice of the Shuttle Is Ours" in Lynn A. Higgins and Brenda R. Silver, eds., *Rape and Representation* (New York: Columbia University Press, 1991), 52-53, explains: "Perhaps it is a staring recognition of human responsibility for ritual murder [stoning] that is symbolized in the gaze that turns us to stone. The story is eroticized to locate the violence between men and women." According to Jean-Pierre Vernant, "Death in the Eyes," in Marjorie Garber and Nancy J. Vickers, eds., *The Medusa Reader* (New York: Routledge, 2003), 210-231, the portrayal of the so-called Gorgo is characterized by frontality, monstrosity, and a confusion of human and bestial elements.
16. Irving Lavin, *Bernini and the Unity of the Visual Arts* (New York: Oxford University Press, 1980), 6.
17. Irving Lavin, "Bernini's Bust of the Medusa: An Awful Pun," in Anna Gramiccia, ed., *Docere Delectare Movere: Affetti, devozione e ritorno a nel linguaggio artistico o del primo barocco romano* (Rome: Edizioni de Luca, 1998), 174.
18. Acknowledging the debt art history must pay to literature for its use of "expressive and persuasive" words in the description of visual art, Lavin, *ibid.*, borrows the term "pun" to call attention to what he sees as an overlooked aspect of Bernini scholarship: "[t]he term *pun*, meaning specifically the unequivocal use of a singular word with more than one meaning, is itself singularly appropriate to its meaning because its origin is quite mysterious—the etymological equivalent, as it were, of the uncanny . . ." Yet, the origin (or maker) of the bust, for Lavin, is precisely not "mysterious," it is Bernini.
19. *Ibid.*, 157.
20. *Ibid.*, 159. Bernini was not a proponent of art as a perfect copy of nature, and defended the artist's creativity. For example, when confronted by critical courtiers about perceived deviations from the King's face in the bust he carved for Louis XIV, Bernini replied, "The secret of portraiture is to make the most of what is fine, and give the whole the effect of grandeur. You should minimize what is ugly or pretty, or even suppress this if possible." Chantelou, *op cit.*, cited in Cecil Gould, *Bernini in France: An Episode in 17th Century History* (Princeton: Princeton University Press, 1982), 82. See also Heinrich Brauer and Rudolf Wittkower, "The Drawings of Gian Lorenzo Bernini," in George C. Bauer, ed., *Bernini in Perspective* (Englewood Cliffs: Spectrum, 1976), 90.
21. Lavin (1998), *op cit.*, 159.
22. *Ibid.*, 160.
23. On the complex pairing of Perseus and Medusa in Cellini's sculpture, see Tobin Siebers, *The Mirror of Medusa* (Berkeley: University of California Press, 1983), 12-13.
24. The tradition of such a rendering is best exemplified by the *Medusa Rondanini* (Munich, Glyptothek, 4th cen. B.C.) whose image has recently been adopted by the house of Versace, and is now used to sell clothing. See Garber and Vickers, *op cit.*, 275.
25. Lavin (1998), *op cit.*, 165.
26. *Ibid.*, 170.
27. For more on the idea of Medusa-as-model, see Marjorie Garber's "Macbeth: The Male Medusa," in Garber and Vickers, *op cit.*, 249-257. Garber explores how reflection and the mirror are played out through the presence of the King in the audience and the motifs in *Macbeth*. For instance, the word "glass" in this period carried the meanings of "mirror" and "model." This is illustrated in the speech to Parliament made by King James (the target audience for the play) in 1609: "[L]ook not vpon my Mirrour with a false light." Garber argues that the glass or mirror in the soliloquy of *Macbeth*, performed directly to the King, is the counterpart of Perseus's shield.
28. Sigmund Freud, "Medusa's Head," in *Sexuality and the Psychology of Love* (New York: Collier Books, 1974), 212-213.
29. The addition of Medusa's power to Athena's virginity reinforces Freud's argument, and serves to further augment his notion that the myth is a parable of sexual terror. As Freud, *op cit.*, 213, sees it: "[I]hus [Athena] becomes a woman who is unapproachable and repels all sexual desire—since she displays the terrifying genitals of the Mother. Since the Greeks were in the main strongly homosexual, it was inevitable that we should find among them a representation of woman as a being who frightens and repels because she is castrated." See also Peter Benson, "Freud and the Visual," *Representations* 45 (Winter 1994): 110-116.
30. Hélène Cixous, "The Laugh of the Medusa," *Signs* 1.4 (Summer 1976): 875-893.
31. Garber and Vickers, *op cit.*, 57.
32. Louis Marin, *To Destroy Painting* (Chicago: University of Chicago Press, 1995), 4-5.
33. Pindar, *Pythian 12* (c. 490 B.C.).
34. *Ibid.* (11.36-37).
35. Marin, *op cit.*, 132.
36. Erica Harth, in *Ideology and Culture in Seventeenth-Century France* (Ithaca: Cornell University Press, 1983), 96.
37. Wittkower (2000), *op cit.*, 209.
38. See Paul Barolsky, "As in Ovid, So in Renaissance Art," *Renaissance Quarterly* 51 (1998): 451-456.
39. Ovid, *Metamorphosis*, trans. by A. D. Melville (Oxford: Oxford University Press, 1986), 98.
40. Paul de Man, "The Rhetoric of Temporality," *Blindness and Insight* (Minneapolis: University of Minnesota Press, 1997), 188.

Order and Things:

Comenius's *Orbis Pictus* and Baroque Representation

DEBORAH KULLY

If we are free to adjust our concepts of things to the forms of things themselves, why should we not be free to fit language to the more exact expression of more exact concepts?

—Johann Amos Comenius, *The Way of Light* (1668)

1.

Johann Amos Comenius wrote most of his books while in exile for his resistance to the Counter Reformation.¹ The famous *Orbis Sensualium Pictus* (1657)—credited as the first picture book—was published as he traveled across Europe as were important earlier works such as the *Jamua Linguarum* (1632) and *The Great Didactic* (1637).² While the *Jamua Linguarum* translates basic concepts and words from Latin into a given vernacular, *The Great Didactic* presents Comenius's philosophy of education. The former was an important experiment for Comenius, serving as a testing ground for a pedagogy aimed at finding a fit between words and things as well as between ideas and experience. However, it is the *Orbis Pictus* that stands as the fullest realization of Comenius's ideas about education in a practical context.

The book appeared almost two centuries after the invention of the printing press made possible the dissemination of knowledge across social and geographical boundaries.³ Printmaking was itself already a didactic project, associated with the uniform reception of texts.⁴ What William Ivins has called the “illustrated informational books of the late fifteenth century,” which described scientific discovery and travel to their readers, are among the first of such undertakings; these brought the viewing of pictures into the home all the while ensuring their consistent narration.⁵ Because of these aspects, the print medium must have seemed eminently appropriate for a project like Comenius's that looked to education as a means of making universal knowledge accessible to all.

Towards these ends, the printer of Comenius's book arranged text and image in a very particular manner; instead of simply appending a caption to an image or illustrating written words, he aimed at a dialogue—complex and variegated—between the two registers.⁶ Thus, text appears within the picture as well as without. One of the significant precedents for this can be found in Italian engineering prints of the sixteenth century, which collapsed together the two registers in order to ensure that the project would always be built in the same manner and that the method of construction would remain uniform.⁷ In Comenius's case, however, what is illustrated is not an edifice to be erected but the things and experiences of everyday life whose perusal is carefully framed, structured, and controlled. In the engineer's case, the need for tight management and strict design may be explained by practical concerns ranging from preventing structural instability to offsetting potential damage. This is far different from Comenius's project, which sought to manage not architecture in the making, but the world and its inhabitants. What, we are left to wonder, are the consequences of Comenius's tightly managed world?

By way of preliminary answer, we might begin with the epigraph of the *Orbis Pictus*, which links the picture book's didactic project to *Genesis* (ii 19, 20): "the Lord God brought unto Adam every Beast of the Field and every Fowl of the Air, to see what he would call them. And Adam gave Names to all Cattle, and to the Fowl of the Air, and to every Beast of the Field." Eden was a place in which objects had their names assigned to them by Adam, and the relation between names and things was, for all intents and purposes, completely transparent. The question, for Comenius, seems to have been the following: how could men expelled from Eden possibly understand objects and the language that designated them? Comenius's response was to "guide" those alienated from their God "thorow All... shew thee All... Name thee All," and thereby reestablish the ostensibly lost connection between language, representation, and objects.⁸ In so doing, his project intervened in a theoretical debate that, in the seventeenth century, grappled with the dream of a universalized nomenclature—what Foucault has called "the universe folded in upon itself"—and by extension, with the problem of representation.⁹

2.

Comenius, along with British empiricists like Francis Bacon and the theologian and philosopher John Wilkins, entered into this theoretical debate between 1641 and 1668 by means of a series of pedagogical experiments. These were spearheaded by the Philosophical Language Movement, which was founded in London at the Royal Society where Samuel Hartlib, an important patron, gathered together those thinkers interested in the invention of an alphabet in which letters had a "real character."¹⁰ The group's inauguration, which coincided with Comenius's move to London in 1641, culminated in the publication of Wilkins's *Essay Towards a Real Character* (1668). The latter insisted on a clear connection between description and material phenomena—a coherent relationship between language and object that ran counter to Cartesian views on the impossibility of such a fit. As René Descartes himself put it in a letter to Marin Mersenne of 27 August 1639,

one cannot provide a logical definition [of something] which helps us to know its nature. I believe the same about many other things, which are very simple and are known naturally, such as shape, size, motion, place, time, etc., so that, when one tries to define these things, one obscures them and confuses oneself. For example, someone who walks across a room gives a better explanation of what motion is than someone who says that it is the act of being 'in potency.'¹¹

For Descartes, language obscures. The motion of "someone who walks across a room" is obfuscated by expressions such as "being in potency"—with the result that the complexities of an arbitrary system of names and definitions can only muddle the "nature" of lived experience.

Michel Foucault's *The Order of Things* responds directly to this problem. Grammar systems, in his account of seventeenth-century semantics, are "civilizing" devices by which man can presumably understand his subjective encounter with nature and society, master his environment, and communicate with others in a socially productive way.¹² Such "civilizing" devices were rigidly conventionalized and ran the risk of controlling and homogenizing divergent experiences. Power is thus introduced by Foucault into the deductive scheme endorsed by Cartesian logic in which language necessarily reduces objects to their lowest common denominator. Difference is eliminated, and objects, once subsumed by the general order of things, are standardized by a semantic system that deliberately aims to eclipse multiplicity and variability. Language then steps in to annihilate the object.

British empiricists at the Royal Society took a radical stand against the Cartesian endorsement of system for

system's sake. Bacon, for one, denigrated Descartes's classification systems as "idols of the human mind" and called instead for a process of inductive logic that moved from the physical world to the realm of general rules.¹³ Induction, he explained, worked to prioritize a sensory and experimental assessment of things before proceeding to the realm of language, communication, and universalization. Yet the positions taken by Descartes and Bacon are not, perhaps, as polarized as they may seem at first.

In the modern period, much has been made of the potential clash of inductive and deductive approaches. For example, Carol Armstrong, among others, has argued for the nineteenth-century positivist elaboration of this same clash in the work of philosophers like Auguste Comte. Armstrong explains that "induction rests on and requires deduction, that deduction is the ground of induction, that any a posteriori movement between facts and their interpretation requires an a priori base even to begin."¹⁴ I want to suggest that an earlier incarnation of this fraught interdependence emerged in Comenius's work. The collision of method and experimentalism sets the stage for the *Orbis Pictus*, which can be understood as an exemplification of the interference universal ordering and direct experience produce in each other's ways of working. If Comenius's project seeks to negotiate, as I will argue, between deduction and induction, it does so by attempting simultaneously to endorse an abstract system of names, grammars, and classifications and to legitimate tangible specificities.

In fact, it can be argued that pedagogy was the ideal ground from which to test the validity of the positions offered by these competing schools of thought. Comenius's experiment ran something like this: the child, conceived of as a blank slate, encounters both the natural and represented worlds, which are inevitably misaligned. The *Orbis Pictus* sought their realignment in order to ensure that neither the real nor language was sacrificed. With the child's direct experience ostensibly protected, the aim was to integrate him into the communicative systems through which his experience could best be expressed and understood by others. Hence, the *Orbis Pictus* emphasizes so-called Pansophy, the universal laws revealing the harmony in all, and Panglottia, the appropriate language in which to convey such laws.¹⁵ Comenius's collapse of experience and method prompts a number of questions: can the universal impose order while still acknowledging the individual's direct experiences? And, by the same token, does subjectivity leave room for mutual understanding in language?

In order to study this unexpected coupling of concepts like the subjective and the universal, experience and language, and induction and deduction in the *Orbis Pictus*, it is necessary to consider its theological and philosophical context. Comenius, along with fellow members of the Philosophical Language Movement, was deeply affected by the Thirty Years War (1618-1648). A territorial drama whose onset in Eastern Europe stemmed from skirmishes between Catholics and Calvinists in Bohemia, this very long war came to involve most of the European continent. The religious and political stakes, which were driven by continual conflict between the Holy Roman Empire and Lutherans (in Germany, Denmark, Sweden, and the Netherlands) as well as the Hapsburg threat to French interests, were resolved in the Peace of Westphalia (1648). Comenius and his colleagues found themselves caught between their Protestant beliefs and a desire to assuage the Catholic opposition in order to maintain the tenuous peace brokered in 1648. Key to this particular group's experience of these years was the tension surrounding Catholic sacraments such as the Eucharist (the raising and consuming of the host), which honors the forsaking of Christ's mortal body for the redemption of man. At the heart of the conflict between Protestant and Catholic world views was a markedly different understanding of the ritual's symbolic meaning and mechanisms.¹⁶

Following Catholic dogma, the host *is* Christ's body (his actual flesh and blood) and the Eucharist, an act engi-

neered by Him; the divine (the body of Christ, the presence of God) resides in an actual object from the world (the host, this rite)—and the relationship between the two requires no mediation whatsoever. This, in other words, is induction at work: the host does not symbolize Christ so much as it makes Him manifest, each congregation member accessing or, more to the point, *inducing* the Holy presence during ritualized consumption. For Catholics, then, the direct experience of Christ's body in the host becomes a universal truth, ahistorical and independent of linguistic and cultural variables. By contrast, Protestant Reformers foregrounded the problem of language and symbolic representation where Christ's presence in the host was concerned. They argued that the sacrament was ultimately a performative act undertaken by a congregation whose faith sat between signifier (host) and signified (Christ's body). Thus they insisted on a clear-cut distinction between bread and wine on the one hand, and on rites, signs, and words, on the other. This splitting apart of signifier and signified, reinforced by an insistence on the representational nature of the Eucharist, introduced the idea of mediation into the workings of faith and thereby brought to light the problem of representation itself. Catholic induction, it can be argued, was necessarily transformed by Reformers into a form of deduction; to their minds, the system of faith, and its pronouncements concerning the presence of Christ in the host, was one that left signifier and signified, language and experience, irrevocably distinct—and it was only the congregation's ritualized leap of faith that made Christ appear.¹⁷

Not surprisingly, it was also during this period that the Philosophical Language Movement grappled with processes of signification. Its members sought out a universal language (somewhat akin to the mechanics of the Catholic belief system), whose "real character" would close the gap between words and the things and events they denoted. Ideally, language would have only one word for each thing—and so would eradicate the discrepancy between subjective experience and generalized discourse. If the Reform movement acknowledged the leap of faith in the adherence of representations to the phenomena they described (in their case, the host to Christ's presence), the Counter Reformation and the Philosophical Language Movement believed, or at least hoped, that structures of representation (the host and language respectively) emerged directly and truthfully from the world. To put it another way: where processes of signification were concerned, the Reformation and the Philosophical Language Movement were curiously at odds. This left someone like Comenius, who belonged to both, in an altogether difficult position—a position whose ramifications conspicuously surfaced in the unexpected pairing of induction and deduction, of contingent experience and universal system, to be detected in the *Orbis Pictus*.

In order to address such an unexpected pairing, it is helpful to turn to the description, in Foucault's *The Order of Things*, of the historical transition from a so-called ternary system of representation to a binary one.¹⁸ Foucault explains that the ternary system, which reached its apogee during the Renaissance, was based on a process of signification whereby objects were composed of a significant, a signified, and their conjuncture. In other words, Foucault is arguing for a state of affairs in which a material object (such as a table or the host) was integral to the word or concept (such as table or Christ) that identified it—and thus things were indistinguishable from their names. It was in the seventeenth century that signs were "lodged" no longer in things but in systems of representation:

[S]igns are now set free from that teeming world throughout which the Renaissance had distributed them. They are lodged henceforth within the confines of representation, in the interstices of ideas, in that narrow space in which they interact with themselves in a perpetual state of decomposition and recomposition. As for similitude, it is now a spent force, outside of the realm of knowledge.¹⁹

"[Signs] lodged henceforth within the confines of representation": the binary system Foucault is describing as emerging in the Baroque period rests on representation's newfound capacity to take the place of similitude—to mark a new distance between things and language that severs direct experience from its expression. Such a system would seem to heighten the urgency of the promise made by the *Orbis Pictus* to "guide thee thorow All... shew thee All... Name thee All."²⁰

Guide: the systems that order the descriptions of things apprehended in the world. Show: things themselves. Name: the systems of description newly conjoined through representation with things themselves. In view of this agenda that takes its reader to school by guiding, showing, and naming, the next sections of this essay will attempt to understand the structure of the *Orbis Pictus* by means of Foucault's paradigm—that is, by means of the historical shift he describes from a ternary to binary system, from faithful similitude to abstract representation (in language and image). The following pages set out to discover the extent—and limits—of Foucault's usefulness for interpreting a text that struggles with the semantic alignment of representation and experience.

3.

The *Orbis Pictus* opens and closes with plates dedicated to the art of deduction and its role in Comenius's pedagogy. Entitled "Invitation" and "The Close," the first and last plates repeat the same image. In its role as first plate, the image shows a child (the Pupil) looking up at a man (the Master) who points to the world and thereby announces the journey they are about to undertake through a landscape whose background is defined by a small town (Fig. 1). With God's help, the Master lays out his lesson plan: "Before all things, thou oughtest to learn the plain sounds, of which man's speech consisteth. Which living creatures know how to make, and thy Tongue knoweth how to imitate, and thy hand can picture out. Afterwards, we will go into the world, and we will view all things."²¹ In this order of pedagogy, the Pupil will first learn conventions for speaking, imitating, and picturing. Once these conventions have been mastered, the Pupil is prepared to "go into the world" and "view all things."

While the last plate reiterates the first, it now suggests the parting of Master and Pupil: "Thus thou hast seen in short, all things that can be shewed, and hast learned the chief Words of the English and Latin Tongue. Go on now and read other good Books diligently, and thou shalt become learned, wise, and godly."²² Presumably after the journey, the Pupil will return to language and "read diligently." The experienced world of things is here neatly bracketed by language at its beginning and end. And if the student is permitted to explore other modes of pedagogy, induction for instance, its practice will be confined to the limits imposed by the deductive brackets strategically positioned at the book's opening and closing.

As the structure of the book makes clear, the carefully choreographed relationship between deductive and inductive modes of pedagogy established in the introduction and conclusion also orders the sequence of plates: the plates move from the Christian belief system—God, heaven, and world—organizing life on earth to descriptions of the natural world and daily life to moral ideals (ethics, prudence, judgement, or diligence). This sequential division of the Pupil's extra-worldly and worldly encounters into systems, things, and ideals may be described first as a *deduction* in which things are initially defined through and by the Christian system to which they belong, then as an *induction* in which the observation of daily life leads to abstract moral values.

Accordingly, in the book's first group of plates ("God," "The Heaven," and "The World"), each of which is

Orbis Sensualium Pictus,

A World of Things Obvious to the Senses drawn in Pictures.

Invitation. I. Invitation.



<i>The Master and the Boy.</i>	<i>Magister & Puer.</i>
M. Come, Boy, learn to be wise.	M. Veni, Puer, discere sapere.
P. What doth this mean, to be wise?	P. Quid hoc est. Sapere?
M. To understand rightly.	M. Intelligere recte.

Figure 1. "Invitation," J.A. Comenius, *The Orbis Pictus*, ed. by C.W. Bardeen and trans. by Charles Hoole (1887), 1.

The World.

III.



The Heaven, 1.

Cælum, 1.

Figure 2. "The World," J.A. Comenius, *The Orbis Pictus*, ed. by C.W. Bardeen and trans. by Charles Hoole (1887), 6

God

(5)
II

Deus.



<i>God is of himself from everlasting to everlasting.</i>	<i>Deus est ex seipso, ab eterno in eternum.</i>
<i>A most perfect and a most blessed Being.</i>	<i>Perfectissimum & beatissimum Ens.</i>
<i>In his Essence Spiritual, and One.</i>	<i>Essentia Spiritualis & unus.</i>
<i>In his Personality, Three.</i>	<i>Hyposiasi Trinos.</i>
<i>In his Will, Holy, Just, Merciful and True.</i>	<i>Voluntate, Sanctus, Justus, Clemens, Verax.</i>
<i>In his Power very great.</i>	<i>Potentia maximus.</i>
<i>In his Goodness, very good.</i>	<i>Bonitate Optimus.</i>
<i>In his Wisdom, unmeasurable.</i>	<i>Sapientiâ, immensus.</i>
<i>A Light inaccessible; and yet all in all.</i>	<i>Lux inaccessa; & tamen omnia in omnibus.</i>
<i>Every where, and no where.</i>	<i>Ubique & nullibi.</i>

Figure 3. "God," J.A. Comenius, *The Orbis Pictus*, ed. by C.W. Bardeen and trans. by Charles Hoole (1887), 5.

presented in a circular frame, the Master introduces the Christian system as a *guide* with which the Pupil can understand the order of things he will encounter on their journey. Word and image thus establish the inventory that the rest of the text will go on to detail and the hierarchy that organizes it. A plate like “The World,” for example, which stratifies stars, clouds, birds, water, beasts, and men, is reiterated by the descriptive list below it (Fig. 2). Here, Comenius concludes: “Thus the greatest Bodies of the World, the four Elements, are full of their own Inhabitants.”²³ The order of things, then, is set into play visually and textually by an insistence that the different species inhabit distinct strata, and that these strata have a hierarchical relationship to each other (e.g. land and water are below sky). Only with this kind of buffer in place can the Master then *show* the Pupil, in the book’s second group of plates, plants, beasts, and man. These pages picture the elements, plants, living creatures, man, his body, his occupations, his environment, his achievements, and his learning. Their showing, however, is not neutral: the order of their presentation is always shaped by the system to which they belong (“God,” “The Heaven,” and “The World”). The last group of plates, which turns to a set of moral values, is composed of elements found in the book’s previous sections. This is where the Master is faced with the daunting task of teaching abstract ideas to his Pupil—and in order to do so, he uses the words and images that the rest of the book has established, combining them in new ways to present what are utterly intangible concepts like “Temperance” and “Fortitude.” As we shall see, Comenius attempts in this last section to make our understanding of these concepts as universal as our apprehension of such things as flowers and, in the process, to make *naming*—through word and image—more closely related to the things it aims to describe.

This oscillation between deduction and induction, it will be argued, is also accompanied by an oscillation between what Foucault calls binary representation and ternary similitude. That is to say, Comenius’s God-World-Heaven system, in which preexisting abstract symbols like “God” are free of attachment to concrete things, is later followed up by the naming of values whose representation is composed of the images and words for concrete things that the Pupil has just seen and learned.

4.

To picture “God” is no simple task and this is what Comenius sets out to do in the first set of plates devoted to *guiding* (Fig. 3). Without any clear referent in the world of things, the divine is imagined differently by all religions and cultural groups. Conjoining Christian, Jewish, Muslim, and pagan symbols, Comenius’s God aims to speak across religious and cultural divides. Pagan circles, stars, light, and signs of infinity surround Christian representations of the Trinity, and Hebrew letters spelling out the name of God and thanks. Muslim stipulations that religious description rely on the language of abstraction as opposed to that of resemblance are also respected.

The plate dedicated to God is unique in Comenius’s book in that it is the only one whose picture does not contain numbers linking its elements to a text running beneath or beside it. Even the other prefatory plates of “The Heaven” and “The World” are designed in the same manner as those in the rest of the book. In the case of God, though, word and image run in parallel lines that never intersect. Unlike representations of birds, for instance, with their stable and shared signifieds in the natural world, God has no such natural reference point, leaving his image vulnerable to flights of subjective fancy. Natural things, by contrast, set into play a kind of hierarchy between image and word; by this I mean that images of nature bear some kind of resemblance to the things they describe while words do not. In the representation of God, however, neither images nor words have the benefit of a mimetic connection to the signified deity. This puts the latter plate in a unique position, for here word and image are equally inadequate to the task at hand. If God comes before the image and word hierarchy, then it follows that

the plate dedicated to His presentation cannot cross-reference a more primary image with a narrative text.

This plate is exceptional in another important way as well. The phrase “a Light inaccessible; and yet all in all,” which appears in the text below the image, describes the mechanics and meaning of the concentric circles emanating out from Christian and Jewish symbols to become rays of light cast on “all.” Terms like “Being,” “Essence,” “Personality,” “Will,” “Power,” “Goodness,” and “Wisdom” introduced here resonate throughout the rest of the book, reappearing in countless other plates such as “Patience,” “Humanity,” and “Society Betwixt Man and Wife.” In Comenius’s view of the world, God and his image inaugurate a system from which everything else is necessarily deduced—and the imaging of this foundational principle, furthermore, exemplifies Foucault’s binary system at work. Signifier and signified touch at absolutely no point, with abstraction signaling the way in which representation marks a *distance* from and not a fit with the object that lies at its source.

Yet despite the emphasis on deduction, abstraction, and world orders with which the book begins, it is in the second group of plates—those in which the Master takes the Pupil “into the world” to “view all things”—that we begin to detect inductive processes at work. Consider the plate entitled “Serpents and Creeping Things” (Fig. 4). Here we see a landscape populated by snakes and lizards with mountains and a forest in the background as well as a house on the right hand side that is cut off by the frame. In contrast to the image of God, the representation of the reptilian world depends as much as it can on a language of imagined resemblance. Viper, salamander, and lizard are meant to look like the things they point to. Moreover, as much as these pictures (of dragons in particular) are based on conventionalized understandings developed in fairy-tales and other myths, they still refer to things believed to exist in the world. Another important distinction between this plate and the plate describing God is its relationship to the text. Text and image are cross-referenced here by means of a set of numbers that appear in both. The reader’s motion back and forth between the image and the list that accompanies it forecasts the conjuncture between significant (the word and image describing a viper) and signified (the viper the word and image point to) described by Foucault’s ternary system; that is to say, representation rests on resemblance and thus things speak their names.

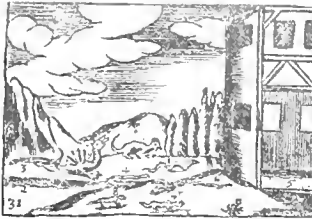
That name, “Serpents and Creeping Things,” appears above and below the image in Latin and the vernacular respectively—and inevitably affects our understanding of the image. The terms carry with them a set of preconceptions: about the primitive, the fantastical, and the world before man. The image, in turn, is configured to support and elaborate just such a reading. It is divided into two parts: on one side, a primordial mountainous scene, horizontal in feel, replete with water and “great stones” in which snakes, adders, and vipers “creep by winding themselves” and “killeth with breath ... and poysonous tail”; on the other side (and this is left unmentioned in the text), a house whose vertical façade earmarks the presence of man.²⁴ Rough/civilized, horizontal/vertical, beast/man: these binaries structure our apprehension of the image, making of serpents and creeping things an object-lesson, and it is here that we can begin to detect induction at work. That is to say, the composition of things in the image suggests a world order (a system of relationships or hierarchies); the opposition of rough and civilized puts into place a set of values to be taken up again in the next group of plates devoted to moral ideals. Reinforcing this turn towards induction, words under the image detail what is pictured, specifying location in the world and position in the order of things. “The water-snake in the water,” “The boa in Houses”: the locales inhabited by reptiles point to other plates (“The Water” and “A House”), and we thereby move from specific things (water-snakes and boas) to their environments (water and houses).

Following the lead of the images in the second group of plates, the culmination of the *Orbis Pictus* is the repre-

The <i>Tiger</i> , 3.	<i>Tigris</i> , 3
the cruellest of all.	immanissima omnium.
The Shaggy <i>Beast</i> , 4.	Villosus <i>Ursus</i> , 4.
The ravenous <i>Wolf</i> , 5.	Rapax <i>Lupus</i> , 5.
The quicksighted <i>Ounce</i> ,	<i>Lynx</i> , 6. visu pollens,
6. The taylor'd <i>fox</i> , 7.	Caudata <i>Vulpes</i> , 7.
the craftiest of all	astutissima omnium.
The <i>Hedgehog</i> , 8.	<i>E. inermis</i> , 8.
is prickly	est aculeatus
The <i>Bat</i> , 9.	<i>Moloss</i> , 9.
delighteth in holes.	gaudet latebris

XXXI

Serpents and Creeping things



Serpentes & Reptilia

Snakes creep by winding themselves;	Angues repunt sinuando se;
The <i>Adder</i> , 1.	<i>Coleber</i> , 1.
in the wood;	in Sylva;
The <i>Water-snake</i> , 2.	<i>Natrix</i> , (hydra) 2.
in the water;	in Aquâ;
The <i>Viper</i> , 3.	<i>Vipera</i> , 3.
amongst great stones.	in saxis;

Figure 4. "Serpents and Creeping Things." J.A. Comenius, *The Orbis Pictus*, ed. by C.W. Bardeen and trans. by Charles Hoole (1887), 37.

Liberality

CXVII.

Liberalitas.



Liberality, 1.	Liberalitas, 1.
keepeth a mean about	servat modum circa
<i>Riches</i> , which she honestly	<i>Divittas</i> , quas honestè
seeketh, that she may have	quærit ut habeat
somewhat to bestow on	quod largiatur
them that want, 2.	<i>Egenis</i> , 2.
She cloatheth, 3	<i>Hos vestit</i> , 3
nourisheth, 4.	<i>nutrit</i> , 4
and cherisheth, 5.	<i>ditat</i> , 5
these with a cheerful coun-	<i>Vultu hilari</i> , 6.
tenance, 6.	& <i>Manu alata</i> , 7.
and a winged hand, 7.	Subjicit
She submitteth her	<i>opes</i> , 8. sibi, non
wealth, 8. to her self, not	se illis, ut <i>Avarus</i> , 9.
her self to it, as the covet-	qui habet,
ous man, 9. doth, who hath,	ut habeat, &
that he may have, and is	non est <i>Possessor</i>
not the Owner,	sed <i>Custos bonorum suor-</i>
but the Keeper of his goods,	<i>um</i> , & insatiabilis,
and being unsatiabile,	semper corradiit, 10.
always scrapeth together, 10.	Unguibus suis.
with his Nails.	

Figure 5. "Liberality." J.A. Comenius, *The Orbis Pictus*, ed. by C.W. Bardeen and trans. by Charles Hoole (1887), 147.

sentation of the values and abstract ideals governing man's relationship to the natural world and other men—and the last group of plates grapples with this challenge. The plate entitled “Liberality” is typical of those devoted to the description of qualities, which, like God, are without referents in the natural world (Fig. 5). Here we see a large woman surrounded by other smaller figures in a landscape. The assembly of so many figures in one landscape already indicates to us that the idea being described has something to do with man's relationship to other men. In this sense, it is similar to the plates devoted to “The Seven Ages of Man,” “The Society betwixt Parents and Children,” “The Society betwixt Masters and Servants,” and “Regal Majesty.” Unlike these other plates, however, which use a single scale for all of the figures pictured, here one figure is three times larger than all of the others. The latter's size and the captions tell us that she personifies Liberality, and her particular attitude towards wealth (symbolized throughout the image by coins) is contrasted with what is identified as “the covetous man” foraging in the forest on the left side of the landscape, “the prodigal” (just to the right of Liberality) proudly and carelessly dropping precious coins on the ground, and “want” extending his empty hat to Liberality. Liberality herself wears a benevolent expression as she lets coins fall into the hat “want” extends in her direction. The attitude towards wealth being exalted here is further described by the surrounding objects. The chest on which Liberality's left foot rests and the luxurious fabrics draped across her body together suggest that she is someone who cares about material possessions while her winged hand symbolizes an angelic or generous nature.

What Comenius attempts to do here is rather astounding. Relying only on the inventory of things shown and named earlier in the book, he sets out to describe for his Pupil the proper and necessary relationships among them. The figures, plants, and coins represented in earlier plates are now related to each other; for instance, man (woman here) “cloaketh, nourisheth, enricheth, these [other beings and his environment] with a chearful countenance, and a winged hand.”²⁵ What this suggests is that abstract qualities like Liberality are composed out of and induced from the things in the second part of the *Orbis Pictus*—man, animals, and plants—initially deduced from the God-World-Heaven system. That Liberality “keepeth a mean about Riches, which she honestly seeketh, that she may have somewhat to bestown on them that want” is a complex idea that Comenius wants to communicate by using previously described things.²⁶

Yet somehow the whole—the concept of “Liberality”—exceeds its parts (those previously described things). Man, woman, coins, and a forest do not simply inhabit the same frame here, for something else is at work: that is, a rule of social conduct. Man and woman are meant to relate to nature, money, and each other in a very particular manner: charitable but not wanton, generous but not careless, careful but not miserly. In the plate “Serpents and Creeping things,” we discern a set of preconceptions about the world—the opposition of rough and civilized, for instance—in the image's composition. The process of the induction of “Liberality” from a sustained study of its parts is also inevitably affected by a set of organizational biases—the Christian belief system—that run from the book's opening plates all the way through to its conclusion. This system, then, shapes not only the representation of a woman or coins, but also the relationship between them. Induction can never be rid of deduction, and experience can never isolate itself from the realm of language and universality. Yet still there is the hope on Comenius's part that complex moral ideals might—at least in part—be rooted in the experienced world rather than in language, that a shred or trace of the conjuncture of significant and signified characterizing Foucault's ternary system might surface despite the efficiency of a binary representation in which systems of description have completely taken over the experienced world. Hence a last question remains: without the first three plates of the *Orbis Pictus* in place, would an idea like “Liberality” be comprehensible at all?

The answer to this question remains unclear. In the *Orbis Pictus*, the Pupil is given little access to induction, ternary similitude, and the direct experience of the world they promise. In fact, even the book's second group of plates—the so-called things which speak their names—are buffered at their beginning and end by pictures and words only arbitrarily connected to referents (the book's first and third groups of plates). The Pupil thus encounters the possibility of a world unprocessed by representation only to meet the orders that be at every turn. If deduction and induction, and binary representation and ternary similitude can be seen to be engaged in some manner of a struggle in the *Orbis Pictus*, it is one in which the decks are already stacked, so to speak, in favor of deduction, binary representation, and the status quo.

Given Comenius's historical context, neither the *Orbis Pictus*'s simultaneous avowal of representation and experience nor the particulars of the relationship it forges between them is surprising. Comenius's exposure to the Reformation, the Philosophical Language Movement, and their conflicting notions of signification helps to explain his own contradictory position with regards to representation. While Reformers accepted representation as a given, those who ascribed to the Philosophical Language Movement hoped that things might again speak their names without the interference of the system of language. If the former admitted that language and systems of representation more generally necessarily mediated mutual understanding (in the sacrament of the Eucharist, the Congregation's agreement about Christ's presence rather than his actual presence is at stake), the latter believed that this common ground could be reached through a simple and direct engagement with things that would speak their names in the same way to everyone and hence define a universal language. For Reformers, language enabled experience—faith allowed all worshippers to encounter Christ's presence or something close to it. For members of the Philosophical Language Movement, the experience of things speaking their names—and doing so consistently—became universal language, and hence, faith in God's ubiquitous presence.

If Comenius and his *Orbis Pictus* were influenced by both of these agendas—an investment in language and a foregrounding of experience—his project stipulated that language contain experience. The very structure of the book speaks to this; the three sets of plates point up, each in turn, binary representation, then ternary similitude, then binary representation once more only to ensure that experience is kept in check by language. The Pupil is given a system within which to position direct encounters, and potentially conflicting interpretations of the world are thereby prevented from disturbing mutual understanding and order. Hence when the Pupil is given the chance to “go out into the world and view all things,” it is only once language has been established to offset the threat of difference and subjectivity. Perhaps this was among the lessons learned by Comenius during decades of religious warfare; only from the safe confines of a well-defined and widely accepted system of representation was unguided exploration possible. Induction, we learn as Comenius's Pupil, is a dangerous practice without the framework of deduction.

According to Foucault, Baroque representation eclipsed the dangerous possibility that experience might overtake language. The binary paradigm he describes as being inaugurated during this period finally separated the world from its description, rendering the connections between things and the words used to describe them completely arbitrary. Once things and their representations were utterly divorced from each other, the former was rendered passive while the latter grew more powerful. Experience was thenceforth no longer situated in a pure and undisturbed realm, preceded as it was by a language that overpowered and universalized it. After this shift, to Foucault's mind, the ternary system and its prioritization of experience over representation became a historical

relic.

Comenius's *Orbis Pictus* potentially represents an exception to Foucault's model of irreconcilable binary and ternary systems. To be sure, Comenius looked to the binary system, and to representation itself, as the necessary framework for direct experience. Lest we forget his advice: "Before all things, thou oughtest to learn the plain sounds, of which man's speech consisteth. Which living creatures know how to make, and thy Tongue knoweth how to imitate, and thy hand can picture out. Afterwards, we will go into the world, and we will view all things." "Plain sounds," "pictures," and then "the world," or, language, representation, and then experience; Comenius clearly believed that a thing's expression in language and image would not entirely neutralize the Pupil's subsequent experience of it.

Foucault would likely suggest that this so-called experience—those moments in the *Orbis Pictus* when the world teaches us how to speak itself—is only another invention of representation, perhaps even the very justification for its own enterprise. Yet what I want to underscore is that in Comenius's book, the two systems are inevitably transformed by each other's presence. Binary representation is understood to bear the imprint of its ternary predecessor, and is thereby called upon to protect its last vestiges. For Foucault, the simultaneity inherent in Comenius's schema is absolutely implausible—once the world is represented, it can no longer be experienced—and the two options are seen to be mutually exclusive. When representation strikes, "order" usurps "things." Yet if the *Orbis Pictus* is ultimately problematic for *The Order of Things*, it is because "things" can make "orders" too, and so the line Foucault draws between ternary and binary representation risks losing a little of its clarity.

1. The critical edition of Comenius's autobiography is Gerhard Michel and Jurgen Beer, eds., *Johann Amos Comenius: Leben, Werk, und Wirken* (Prague: Academia Verlag, 1992).

2. Originally published in Latin and German, Comenius's *Orbis Sensualium Pictus: Hoc Est Omnium principalium in Mundo Rerum, & in Vita Actionum, Pictura & Nomenclatura* (1657) was quickly translated into twelve European languages as well as Arabic, Turkish, Persian, Mongolian, and Hebrew (according to the editor of the 1727 English edition). The book's popularity was widespread and its translations occurred quickly. One of the first of these was Charles Hoole's *Visible World: or, A Nomenclature, and Pictures of all the Chief Things that are in the World and of Men's Employments therein, in above 150 Copper Cuts published in 1658* one year after the original. In the 1887 American edition of Hoole's translation—J. A. Comenius, *The Orbis Pictus* (Syracuse: C.W. Bardeen, 1887)—the introduction describes the book's publication history. All subsequent references are taken from this edition.

3. According to Elizabeth L. Eisenstein, "print culture" has "three fundamental traits: standardization, dissemination, and fixity." Of particular interest here is her point that together these innovations made the same information available in a variety of contexts and locations. See Elizabeth L. Eisenstein, *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early-Modern Europe* (Cambridge: Cambridge University Press, 1979), vol. 1, 71-88, 113-26. See also William J. Ivens, Jr., *Prints and Visual Communication* (Cambridge: Harvard University Press, 1953); Graham Larkin and Lisa Pon, eds., *Printing Matters*, a special issue of *Word and Image* 17/1-2 (Jan-June 2001), and Christopher Small, *The Printed Word: An Instrument of Popularity* (Aberdeen: The University Press, 1982), 1-13.

4. Gerald P. Tyson and Sylvia S. Wagonheim, *Print and Culture in the Renaissance: Essays on the Advent of Printmaking in Europe* (Newark: University of Delaware Press, 1986), 12-13, point to the print medium's didactic and universalizing potential in the case of English prayer books: "Among church leaders, print was regarded as a means to achieve cohesion in religious life throughout all strata of life. . . . The same text in virtually identical volumes could be easily distributed for a reasonable price throughout the realm." See also Guglielmo Cavallo and Roger Chartier, *The History of Reading in the West*, trans. by Lydia G. Cochrane (Amherst: University of Massachusetts Press, 1999).

5. William J. Ivens, Jr., *Prints and Visual Communication* (Cambridge: Harvard University Press, 1953), 39.

6. According to Daniel Murphy, *Comenius: A Critical Reassessment of his Life and Works* (Dublin: Irish Academic Press, 1995), 199-200, "largely because of great technical problems that had to be overcome if Comenius's plans for an extensive use of visual illustration were to be properly realized, the project was in preparation for several years. . . . What he envisaged for the *Orbis* was a much more complex and elaborate process than most printers would have been able to undertake. . . . George Endter of Nuremberg took more than two years to produce woodcuts, each of which had to be prepared individually by the skilled craftsman Paul Kreuzberger." On the Endter dynasty

(1590-1740), see Colin Clair, *A History of European Printing* (London: Academic Press, 1976), 277.

7. Elizabeth L. Eisenstein, *The Printing Revolution in Early Modern Europe* (Cambridge: Cambridge University Press, 1983), 22, points to the uniqueness of engineering drawings and their labeling system in print history: "To treat the visual and as a strict unit is to lose sight of the connecting links, which were especially important for technical literature because they expressed the relationship between words and things." See also Anthony Grafton, *Defenders of the Text: The Traditions of Scholarship in the Age of Science, 1450-1810* (Cambridge: Harvard University Press, 1991), and Adrian Johns, *The Nature of the Book: Print and Knowledge in the Making* (Chicago: University of Chicago Press, 1998).

8. Comenius, *op. cit.*, 2.

9. Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1994), 17.

10. Benjamin DeMott, "Comenius and the Real Character in England," *PMLA* 70.5 (Dec. 1955): 1068-1070, has traced the origin of the term "real character" to Bacon's description of the Chinese language as made up of "Characters Real" in *Advancement of Learning* (1605). Joseph Subbiondo, "From Babel to Eden: Comenius and the Seventeenth Century Philosophical Language Movement," *Historiographia Linguistica* XIX. 2-3 (1992): 261-273, stresses Comenius's importance in the history of the Philosophical Language Movement. See also Joseph L. Subbiondo, ed., *John Wilkins and Seventeenth Century British Linguists* (Philadelphia: John Benjamins Publishing, 1992). Rather than cite the large body of literature on John Wilkins and his role in the Philosophical Language Movement, I refer the reader to Hans Aarsleff, *From Locke to Saussure: Essays on the Study of Language and Intellectual History* (Minneapolis: University of Minnesota Press, 1982), 239-278.

11. René Descartes, "Letter to Marin Mersenne of 27 August 1639," *Discourse on Method and Related Writings*, trans. by Desmond M. Clark (New York: Penguin, 1999), 79.

12. Foucault, *op. cit.*, 78-124, argued that in the seventeenth century, grammar interceded between subject and world, formulating the subject's experience of the world in precise and deterministic terms.

13. Francis Bacon writes in *The Great Instauration*, ed. by Gail Kennedy (1620, Garden City: Doubleday, Doran, and Company, 1937), 37: "There is a great difference between the Idols of the human mind and the Ideas of the divine. That is to say, between certain empty dogmas, and the true signatures and marks set upon the works of creation as they are found in nature."

14. Carol Armstrong, *Scenes in a Library: Reading the Photograph in the Book, 1843-1875* (Cambridge: MIT Press, 1998), 51.

15. Pansophy is "a metaphysical system based on universal laws of thought that would reveal the harmony in all of God's creations and the truth of all things, as manifested through the senses, the intellect, and the Scriptures." Panglossia is the language of that system. See Jeana Caravolas, "Comenius: Unlocking the Gates of Language," *Harvard Educational Review* 51.2 (May 1981): 309-313. Comenius explained in his *Pampaedia* (1656), trans. by A.M.O. Dobbie (Dover: Buckland Publications, 1986), 180: "To sum up: every book in the new age, especially for use in school, will conform completely to Pansophia, Pampaedia, Panglossia and Panorthosia, i.e. it must be Pansophic in imparting the core of full and total wisdom, each book at its own stage progressing at a faster or slower rate, Pampaedic in serving all men's minds in every subject, again each at its own stage, Panglossic in allowing translation into every language in the world by virtue of the simple style, and Panorthotic in serving the important purpose of preventing or reforming corruptions, against each in its own place, and in its own way."

16. According to Howard Hotson, "Irreism and Dogmatics in the Confessional Age: Pareus and Comenius in Heidelberg, 1614," *The Journal of Ecclesiastical History* 46.3 (July 1995): 142, the two groups "had foundered irreversibly on the doctrine of the Real Presence of Christ's body and blood in the sacramental bread and wine. In subsequent years, controversy surrounding the Real Presence had ramified into such questions as the ubiquity of Christ's body, the union of the divine and human natures in Christ, and related questions regarding the nature and administration of the baptism."

17. This discussion of the relationship between the Eucharist and ideas about representation is inspired by Louis Marin's discussion of this problem in the Jansenist context. See his *La critique du discours: Etudes sur la Logique de Port-Royal et les Pensées de Pascal* (Paris: Minuit, 1975).

18. See Foucault, *op. cit.*, 52-58.

19. *Ibid.*, 67.

20. Comenius, *op. cit.*, 2.

21. *Ibid.*, 2.

22. *Ibid.*, 194.

23. *Ibid.*, 7.

24. *Ibid.*, 37-38.

25. *Ibid.*, 147.

26. *Ibid.*, 147.

Fictive and Real Architecture:

A Preliminary Drawing for Andrea Pozzo's Vault Fresco at Sant'Ignazio, Rome

KATHERINE WHEELER

To stand on the yellow marble disc and look up into the vault of the church of Sant'Ignazio, Rome, is to experience an extension of the architectural space of the nave into the heavens (Fig. 1, Pl. 7). Designed and executed by Andrea Pozzo (1642-1709), the fresco is one of the finest examples of Baroque *quadratura*.¹ Pozzo set his work apart from that of many other Baroque fresco painters by anchoring it to his use of architecture, both real and fictive. In the Sant'Ignazio fresco, Pozzo used fictive architecture to create a setting for the groups of swirling figures that depict the glorification of St. Ignatius and the missionary work of the Jesuit order.² Pozzo, in effect, constructed—visually if not literally—a new architecture for the church. Ultimately, this scenographic treatment of architecture through perspective produces a sense of transcendence and connection to the divine that is reminiscent of more theatrical settings. Pozzo's focus on this dramatic use of architectural perspective can be seen in both an early drawing for the design of the vault fresco and his treatise on perspective, *Perspectiva pictorum et architectorum*.

The precise date at which Pozzo began to work on the vault at Sant'Ignazio is a point of contention among scholars, but a recorded visit by Pope Innocent XI in July 1694 marked its completion and opening to the public.³ The vault was not Pozzo's first project combining architecture and perspective. Prior to arriving in Rome in 1680, he had already finished projects in Turin and Mondovì, and once in Rome he had completed the Camere di S. Ignazio (begun in 1682) as well as numerous festival decorations for the Quarante Ore. In each case, he used his unique combination of architecture and perspective to create spatial illusion.⁴ However, it was the 1685 the completion and wide public approval of the fictive cupola of Sant'Ignazio that prompted the Jesuits to consider decorating the vault of the church (Fig. 2). Pozzo's fictive cupola consisted of a flat canvas, painted with a perspectival rendering of the interior of a dome, which was stretched to cover the opening at the crossing of the church. This gave a sense of completion to what otherwise was nothing more than a gaping hole.⁵ Interestingly, Pozzo, in an engraving of the longitudinal section of the church published in his *Perspectiva pictorum et architectorum* depicted the cupola not as if were fictive but as if it had *actually* been constructed (Fig. 3). In this engraving of the section of the church, Pozzo also shows the decoration of the church as it stood prior to his work on the vault. The church must have appeared somewhat unfinished to him. The canvas dome was in place, and Pozzo had painted the pendentives just below it. But the nave was essentially bare; the white vault's decorative scheme was restricted to double bands of stucco work between the windows. Pozzo criticized such simple decoration as being no better than what one might find in a kitchen, and so removed it to accommodate his design. He preserved the bands only partially at the level of the windows, where he stuccoed the space between them and smoothed them into the curve of the vault.⁶ By incorporating similar bands into the trompe l'oeil corbels supporting the paired columns above, Pozzo took full advantage of the surface that remained from the previous decorative scheme as well as from the curve of the vault. This enhanced his design, skillfully masking the transition between the actual architecture and the fictive one. Pozzo relied on this transitional zone—where fictive and real architecture interlock—to draw the viewer further into the spatial illusion and, therefore, strengthen the perspectival effects.⁷ The

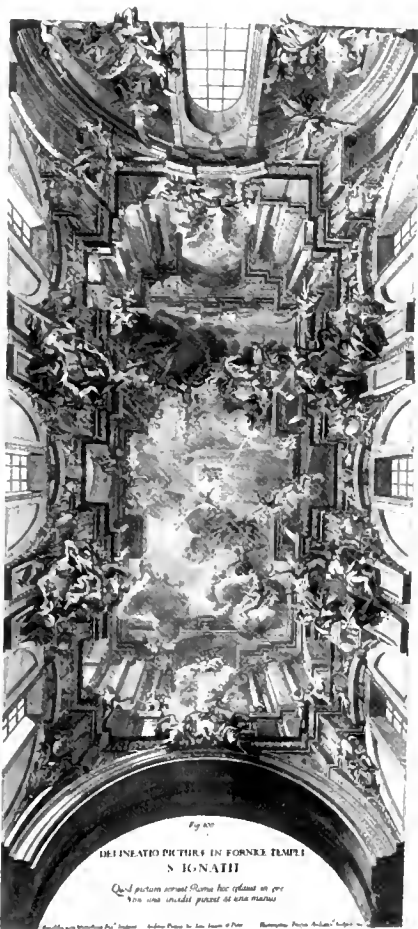


Figure 1. Andrea Pozzo, *Perspectiva pictorum et architectorum* (1723), vol. I, fig. 100.

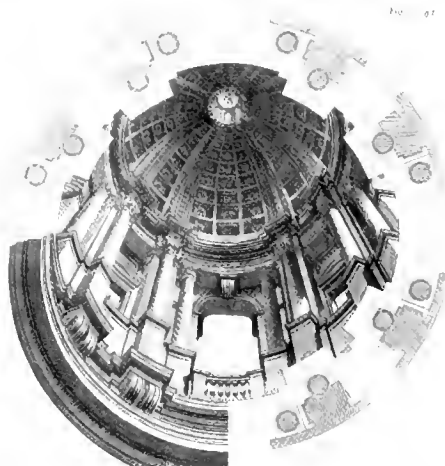


Figure 2. Andrea Pozzo, "Cupola of Sant' Ignazio," *Perspectiva pictorum et architectorum* (1723), vol. I, fig. 91.

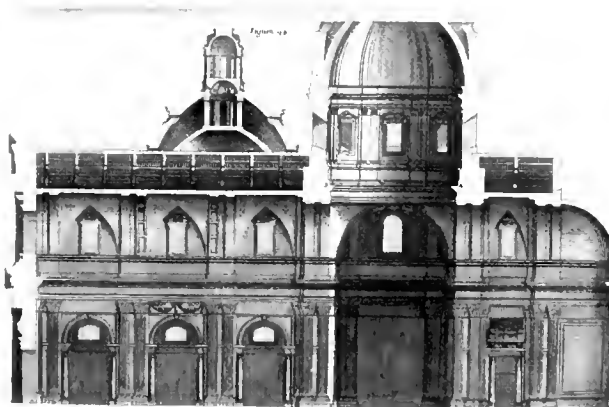


Figure 3. Andrea Pozzo, "Section of Sant' Ignazio," *Perspectiva pictorum et architectorum* (1723), vol. I, fig. 94.

viewer recognizes that the windows are real and that between them lies a complexity of surface and shadow that curves upwards. Yet the attempt to reconcile the interplay between, on the one hand, the presence of windows and shadowed surfaces, and, on the other, the architectural illusion rising above them, is rendered impossible. One can only conclude that the entire construction is, as it were, real.

Engravings recording the design of the vault of Sant'Ignazio are the culminating sequence in the *Perspectiva pictorum et architectorum*. The project was underway at the time of its writing, and the treatise was published in part to help raise money for the completion of the vault.⁸ This explains why the drawings of the project, which appear at the very end of the book in engraved form, do not include an image of the final design. It was the second edition, published in 1702, which contained a foldout engraving illustrating both the architecture and the figures.⁹

The majority of Pozzo's treatise is devoted to what he calls "vertical" perspective—the more common type—in which the picture plane is parallel to a vertical surface. Pozzo's explanation is followed up by the presentation of several designs for festival decorations. By way of conclusion, Pozzo turns to "horizontal" perspective, which he recommends for ceilings or vaults. He insists that "horizontal" perspective is actually much easier to construct; he notes, for example, that a circle in plan such as a column remains a circle and does not "lose its form," once projected, by becoming an ellipse as it would in vertical perspective.¹⁰ In his description of each system, Pozzo begins first by presenting simple architectural elements (such as columns, capitals, cornices etc.), then by combining them in increasingly complex compositions. The lessons of the treatise concern not only the perspectival rendition of these elements, but also their proper combination in the different Orders so as to create appropriate architectural settings.

In the first edition of the treatise, Pozzo shows the design for the vault of Sant'Ignazio in plan and elevation before presenting the final layout in two engravings that divide the whole into separate quadrants, each rendered in perspective with full shadows. When duplicated, mirrored, and assembled together, these quadrants offer a full picture of the fictive architecture (Fig. 4). The paired columns rest on corbels, and are aligned with the paired pilasters of the nave below. Arches rise at both levels between the columns, and an attic storey crowns the composition. Two larger arches at either end break through this attic level and reinforce the longitudinal axis of the church. The composition is loosely based on, but does not duplicate, the architectural elements of the church, establishing a clear relationship between the real architecture of the nave and the fictive architecture of the vault. One of Pozzo's earlier schemes for the vault is much more complex by comparison, and would have stood in stark contrast to the simple and strong character of the nave, where the richness comes from materials rather than a complex disposition of multiple elements (Fig. 5, Pl. 8).¹¹ The similarities and differences between the earlier and the final schemes are more evident when they are compared in elevation and plan (Figs. 6, 7).¹² The earlier drawing, like the engraving of the design in the first edition of the treatise, focuses on the fictive architecture and incorporates neither the figural narrative nor the context provided by the real architecture of the church.

Both the earlier and final schemes for the vault adopt the three bay system of the nave and are composed of similar architectural arrangements of columns, arches, and corbels. These architectural compositions are divided into three horizontal levels: the windows, the columns, and the attic. The result of the simplification of the final design, however, is that the fictive architecture appears as a natural extension of the nave, following its character and clarity. The architecture of the preliminary drawing is more baroque and sculptural by comparison, and would likely have overwhelmed the figural narrative of the overall work as well as undercut any continuity with

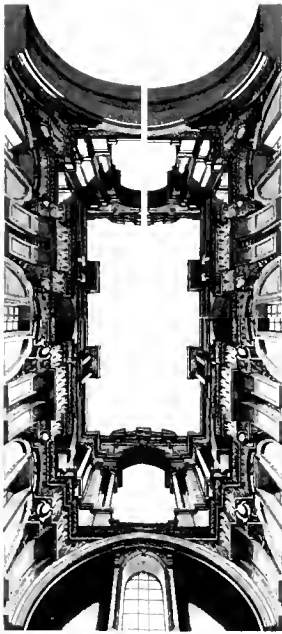


Figure 4. Assembled quadrants of ceiling from *Perspective in Architecture and Painting*, vol. 1, Dover reprint of 1707 British edition. (Author).

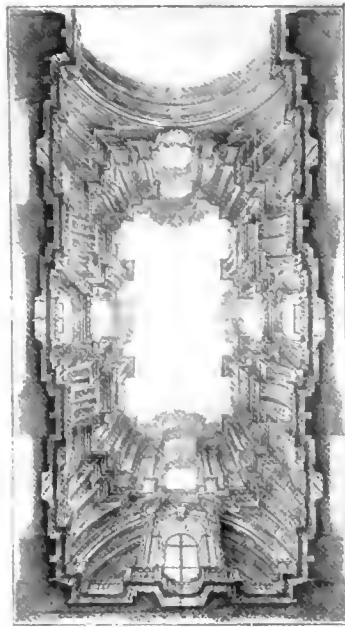


Figure 5. Andrea Pozzo, "Preliminary drawing of Sant'Ignazio vault fresco design," National Gallery of Art, Washington, D.C.

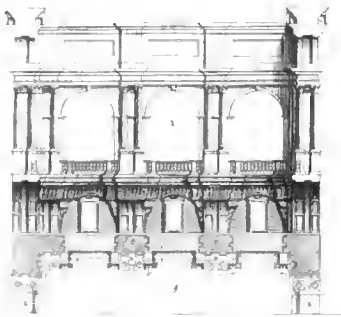


Figure 6. Andrea Pozzo, "Elevation of fictive architecture of Sant'Ignazio," *Perspectiva pictorum et architectonorum* (1723), vol. 1, fig. 96.

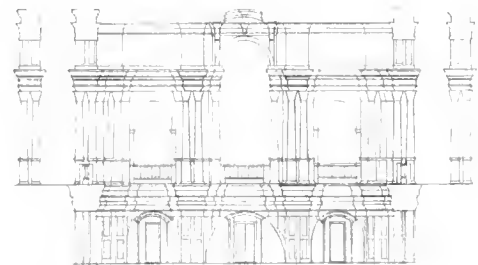
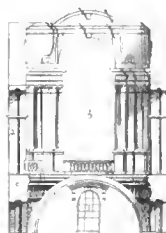


Figure 7a. Elevation drawn from Pozzo's Preliminary Drawing. (Author).

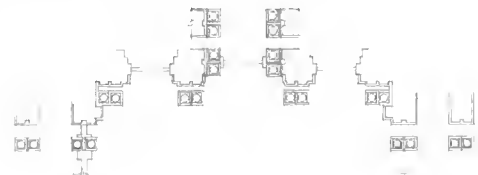


Figure 7b. Plan drawn from Pozzo's Preliminary Drawing. (Author).

the nave. There are other discrepancies between the drawing and the architecture of the church. For example, the drawing emphasizes the center windows by making them larger than those to either side, which become compressed as a result. One of the main problems with this more centralized composition is that neither the center windows nor the center bays of the nave are dimensionally larger in actuality. This contradiction is curious, since Pozzo repeatedly insisted in his treatise on the accurate drawing of existing architecture.¹³ One possible explanation is that Pozzo may have made the drawing prior to taking any measurements of the church, and so was simply preparing an initial idea. The centralization postulated by the drawing was certainly intentional, however, and is reinforced by the large bay with great arches that break the attic line and relate to those at either end. The receding duplication of these arches further accentuates the strong cross axis as well as spreads the visual space laterally.

Pozzo used his knowledge of perspectival techniques in both the preliminary and final designs so as to manipulate and enhance the movement of the eye toward the center of the image. He intentionally pushed the corbels forward between the windows, accentuating the effect of increasing spatial depth by providing an immediate and clear foreground as contrast to the receding space beyond. This effect would have been further enhanced by the actual curve of the vault. In addition to such architectural manipulations, Pozzo used color, shadow, movement, and line to reinforce multiple layers of architectural space.¹⁴ He was not only differentiating the space of the viewer from that of the fictive architecture, but was establishing within the fictive architecture itself a distinct foreground, middleground, and background with which to enhance the sense of depth and realism.

The preliminary drawing indicates the addition of a balustrade at the window level of the nave, which as one scholar suggests, was perhaps a proposal for a suspended walkway left unbuilt due to potential structural problems.¹⁵ While the ledge created by the cornice moulding just above the nave columns is quite deep, the drawing shows the placement of this balustrade at window level where the existing moulding is actually quite narrow (see Fig. 2). Pozzo may have initially intended for the balustrade to function as a screen to this area, as it was a difficult transition point in visual terms (particularly around the windows where the surfaces are more complex). If the balustrade had actually been installed there, however, it would have created a markedly perceptible separation between the real and fictive elements of Pozzo's scheme, and would therefore have negated the sense of horizontal continuity.

Pozzo's fresco at Sant'Ignazio is primarily a reflection of his interest and concern for architecture. In his treatise and drawings, Pozzo consistently focused on the architectural composition as the primary element of the work.¹⁶ Pozzo saw the design process of *quadratura* as inseparable from the design of architecture (i.e. the construction of architectural elements and their depiction in plan, elevation, and section). As Pozzo explained, the preliminary design and layout in two dimensions "is no less necessary for the painting of a Design in Perspective, than it is for raising a structure with solid materials."¹⁷ Fictive architecture is real for Pozzo, in the sense that it creates space—a visual illusion that is nonetheless experiential. Of course, Pozzo recognized that what he had painted was not real architecture. In a witty comment regarding the dome for Sant'Ignazio, he noted that, "Some Architects disliked my setting the advanc'd Columns upon Corbels, as being a thing not practiced in solid Structures; but a certain Friend of mine, remov'd all their Scruples, by answering for me, That if at any Time the Corbels should be so much surcharged with the Weight of the Columns, as to endanger their Fall, he was ready to repair the Damage at his own Cost."¹⁸ Ultimately, Pozzo's fictive architecture anchors the heavenly scene to the physical structure of the church. The figures in the final fresco are what defy gravity, not the architecture.

Some scholars have seen Pozzo's work as focused on the illusion of perspective, and architecture as subservient to that representational emphasis. John Pinto has noted that, "Architecture, for Pozzo, is ultimately a system of representations, an intellectual and optical abstraction rather than an arrangement of concrete forms."¹⁹ Yet one can also propose that for Pozzo, architecture in all its aspects is at the core of perspective. His directions to the reader in his treatise state this clearly: "The Perspective of Structures here treated of, can have no Grace or Proportion, without the Help of Architecture. 'Tis therefore absolutely necessary, that you employ yourself for some time in Drawing, and the Study of that Art ..."²⁰ The artist must be familiar with architecture in order to take full advantage of the power of perspective, which creates both the illusion and experience of space. Pozzo used the techniques of perspectival representation to redefine architecture's potential, and to blur the line between the fictive and the real. Perspective did not, to his mind, order and render comprehensible the world as the Renaissance understood it. Rather, perspective extended beyond that world, and mediated the barriers between the physical and the divine.

1. A longer version of this paper was initially written for a course on the Baroque at MIT in the fall of 2000 taught by Professor Henry Millon. I am much indebted to his many insightful comments and questions. For a general history of Baroque *quadratura*, see Ingrid Sjöström, *Quadratura: Studies in Italian Ceiling Painting* (Stockholm: Alqvist & Wiksell International, 1978).

2. For Pozzo's description of the complex religious iconography, see Andrea Pozzo, *Breve Descrizione del Disegno della Cappella di Sant'Ignazio* (Rome, 1697). See also the summary of his views in Miriam Milman, *Trompe l'Oeil Painted Architecture* (New York: Rizzoli, 1986), 58.

3. A full analysis of the early stages of Pozzo's work on the vault is beyond the scope of this article. For one viewpoint, see Francis Haskell, *Patrons and Painters: Art and Society in Baroque Italy* (New Haven: Yale University Press, 1980), 90. The completion date of the vault is confirmed by Archivum Romanum, Soc. Iesu, Rome, 150a., *Origine del Collegio Romano e suoi Progressi* (1551-1743).

4. For a biography of Pozzo, including his early works, see Bernhard Kerber, *Andrea Pozzo* (New York: Walter de Gruyter, 1971).

5. That painting a fictive cupola was obviously less expensive than building an actual cupola was of major concern as was the possibility that a new structure would overshadow the neighboring Dominican church.

6. The removal of the stucco decoration initially caused an uproar, and there was a small and unsuccessful movement to stop work on the fresco.

7. Pozzo isolated this zone in figure 95 of his treatise by comparing the lunettes around the windows with the area that would be perceived as fictive.

8. The first volume of the treatise was published in 1693, and the second volume, in 1700. A British edition of the treatise, translated by John James, was published in 1707 with plates re-engraved by John Sturt (1658-1730) (who clearly must have traced over the original engravings). See Andrea Pozzo, *Perspective in Architecture and Painting: An Unabridged Reprint of the English-and-Latin Edition of the 1693 "Perspectiva Pictorum et Architectorum"* (New York: Dover, 1989). See also Paul W. Nash, "Andrea Pozzo," in *The Mark J. Millard Architectural Collection: British Books Seventeenth through Nineteenth Centuries* (Washington, D.C.: National Gallery of Art, 1998), vol. 2, 212-214.

9. The second edition was published in Rome in 1702. The text accompanying the illustrations of the vault of Sant'Ignazio is different from that in the first edition, elaborating in greater detail on the process of perspectival construction. A detailed analysis of the two editions would be very valuable and has yet to be undertaken.

10. Pozzo (1989), *op. cit.*, 170. In "horizontal" perspective, the picture plane is parallel to the floor and so therefore the plan is not distorted, whereas in "vertical" perspective the picture plane is parallel to the wall (i.e. perpendicular to the floor), and so the floor surface must recede to the vanishing point or points.

11. National Gallery of Art, Washington, D.C., Inv. no. 1994.16.1. How Pozzo intended the figural narrative to work in this early scheme remains unclear. The drawing is ink and wash on pasteboard, and measures 50.4 cm x 91.2 cm. Maurizio Gargano ascribes to it a date of no later than 1690; see Maurizio Gargano, "Andrea Pozzo, Painted Architecture for the Vault of the Church of Sant'Ignazio in Rome," in Henry A. Millon, ed., *The Triumph of the Baroque: Architecture in Europe 1600-1750* (New York: Rizzoli, 1999), 561.

12. While no plan or elevation remains for the early drawing, it is simple enough to make one. I drew the plan and elevation of the early scheme by reversing the perspective. In other words, from the perspective I found the vanishing point. Then by reversing Pozzo's directions of horizontal perspective, I recreated the plan and elevation using the published drawings as a guide for the overall dimensions of the existing architecture. From this, I determined proportional relationships and obtained the vertical dimensions of the architecture by basing them on the height of the window (which is known from Pozzo's section). For the sake of clarity, my sketch study does not include the balustrade at the window level.

13. It is curious that Pozzo could have made this mistake. He had been working on the dome and various other frescos in the church for

at least six years by this point. One unlikely possibility is that this drawing is not for Sant'Ignazio but for another as yet undetermined project.

14. An analysis of Pozzo's use of color also reveals this intentionally layered effect.

15. Gargano, *op. cit.*, 561.

16. Some scholars have been critical of this, feeling that the architecture "overwhelms" the religious narrative; see, for example, Ebraia Feinblatt, "Jesuit Ceiling Decoration," *Art Quarterly* X.1 (Winter 1947), 246.

17. Pozzo (1989), *op. cit.*, 208.

18. *Ibid.*, 196.

19. John Pinto, "Andrea Pozzo's *Prospettiva de pittori e architetti*: Architecture as a System of Representations," in Christy Anderson, ed., *The Built Surface: Architecture and the Pictorial Arts from Antiquity to the Enlightenment* (London: Ashgate, 2002), vol. 1, 235.

20. Pozzo (1989), *op. cit.*, 11.

A Renaissance Drawing at MIT

RICHARD TUTTLE AND GARY VAN ZANTE

"In Mr. Lawrence Grant White's collection is an excellent drawing by Peruzzi ... it is a valuable illustration of the great beauty and precision of his line drawing."¹ With these words, W.W. Kent signaled the existence in 1925 of an imposing architectural drawing ascribed to the Renaissance architect Baldassarre Peruzzi. White, son of the famous New York architect Stanford White, had acquired it and other Italian drawings as a student in Europe before the first World War.² Sometime later, he gave it to his friend and fellow architect Henry Richardson Shepley, partner at Coolidge, Shepley, Bulfinch and Abbott in Boston. At Shepley's death in 1962, the work passed to his son, Hugh Shepley, who had joined the firm in the 1950s. For several decades the drawing adorned the walls of the firm, and in 2003 it was donated by Hugh Shepley to the MIT Museum (Fig. 1, Pl. 10, and Fig. 2).³

The subject of the MIT drawing is a steeply foreshortened two story palace front with open loggias decorated with columnar orders, Ionic below and Corinthian above. Raised on steps, the facade consists of seven bays, the central one projecting forward as a pavilion. The lower loggia has groin vaults, and the upper loggia, domical vaults. At ground level, low balustrades frame the structure at both ends. The image was done with pen and brown ink on three sheets of heavy laid paper.⁴ The ink lines were deftly laid down with straight edge and compass while more complex details, such as column bases and capitals, were filled in freehand. The overall dimensions are impressive: 86 cm. by 53 cm. (34 inches by 21 inches). The original support, while robust, is dirty and riddled with folds, creases, stains and foxing. The verso is a palimpsest of attached papers from several conservation campaigns. At the center, early losses to the original ink drawing were patched and reconstructed in graphite. Strips of paper were glued on to strengthen the edges.

Soon after it was made, the drawing received the first of several inscriptions. On the balustrade at the lower right corner, one reads: "Baldasar da Siena fe[ci]t," identifying the drawing as the work of Peruzzi. A second inscription on a corner patch on the verso, "Prospettiva di Baldasar da Sie[na] et lumaca," reasserts Peruzzi's authorship while apparently alluding to a spiral staircase not present in the drawing.⁵ Again on the verso, a strip of paper on the left edge bears a faint inscription placing the drawing in Rome. It reads, "Il Palazzo di Vercelli a Monte c[avallo]," which refers to the Palazzo Ferreri—occupied in the sixteenth century by the cardinal bishops of the north Italian town of Vercelli—that stood on "Monte Cavallo," the Quirinal Hill in Rome.⁶ However, the architecture here bears no resemblance to the Ferreri palace, which was destroyed in the seventeenth century. The longest inscription, the draft of a letter, is located at the center of the verso, where a large patch cut from scrap paper replaces losses caused by rodents. The text is fragmentary, with gaps, mistakes and corrections and without names, places or dates.⁷ Addressed to a patron, the letter places the writer in a courtly context. That he was by profession an architect is suggested by faint traces nearby of a ground plan.

The inscriptions identify Peruzzi as the author of the MIT drawing. His renown as a learned architect and draftsman was clearly important to the early owners who put his name on the drawing. Baldassarre Peruzzi (1481-1536) was trained as a painter in his native Siena. Around 1503, he went to Rome where he designed, built, and



Figure 1. Attributed to B. Peruzzi. Architectural view, recto (MIT Museum, Cambridge MA).



Figure 2. Verso of Fig. 1

decorated with paintings the suburban Villa Farnesina (1506-11) and erected the elegant neo-Antique Palazzo Massimo alle Colonne (begun 1532). He also served as second architect to the rebuilding of the basilica of St. Peter's, for which he executed a splendid series of graphic studies. As a draughtsman he pursued a life-long study of ancient architecture, was a pioneer in the early development of perspective theory, and revived illusionistic scene design for the theatre.⁸ At his death some of his drawings passed to Sebastiano Serlio, who used many of them to illustrate his famous multi-volume architectural treatise.⁹

The architectural conception of the drawing reflects themes central to Italian Renaissance architecture. One is the structural system of the façade—superimposed loggias on piers with groin and domical vaults—which are found in Roman monuments such as the Coliseum or the Theatre of Marcellus. Renaissance architects used such monuments as models for the design of arcaded façades for civic buildings and the courtyards of private palaces.¹⁰ A second theme involves the classical Orders. In the drawing, applied Ionic columns on pedestals carry an entablature from which rise Corinthian columns. The individual components, proportions and details are informed by Roman precedents, especially triumphal arches, which lavishly enhance the front of what appears to be a princely palace or public building. The learned richness of the classical language and the architectural inventiveness reinforce the old attribution to Peruzzi.

Also arguing for Peruzzi is the clarity and force of the perspective image. One of the old inscriptions, in fact, identifies the subject of the drawing not as a specific building but as a "prospettiva," a perspective construction. The building looms over the beholder while its arcades, framed by half-columns and jutting cornices, rush dramatically into deep space. Moreover, the vanishing point of the "prospettiva" has been positioned eccentrically in order to display the full length of the façade, to highlight the projecting pavilion, and to reveal the structure and interior articulation of the superimposed loggias.

Sixteenth-century architects were not in the habit of making large or detailed perspective views as aids to designing buildings.¹¹ Plans and elevations normally sufficed or, in some circumstances, three-dimensional models. But grand, steeply-receding building fronts like the one in the MIT drawing were a staple in the pictorial arts, essential for spatial settings in religious and secular paintings, woodcuts and engravings, colored intarsia panels and theatrical scenery. The emptiness and force of the image seems to exceed the requirements of painting, and in fact it is more closely akin to architectural views found in Renaissance intarsia work (inlay or marquetry). Indeed, some wood-paneled choir stalls are comparable in size to the drawing, suggesting it may have been intended for transfer.¹²

The execution of the image, finally, deserves attention. Done without underdrawing, the overall evenness of the drafting—the hard pen lines made with straightedge and compass, relieved only by freehand details—strongly suggests that it follows or reproduces an already finished scheme, and that it may have served a mediatory role as cartoon or *modello*. It is not impossible that the drawing is the work of Peruzzi's studio, perhaps carried out under his direct supervision. The lack of pictorial qualities such as highlights and shadows or color may be taken to indicate that it was abandoned.

Further analysis of the drawing may lead to a definitive attribution, but whether the work of the master or a follower, the old inscriptions and the care and attention the drawing has received from its owners testifies to its veneration across four and one-half centuries. In the twentieth century, the drawing represented a conception of architecture very much alive in the design work of its owners. Shepley's gift to MIT now affords an opportunity

for a wider community of scholars and students to rediscover issues in classical design, techniques of perspective rendering, and not least the limitations and virtues of hand-made images.

This note previews an exhibition at the Wolk Gallery, Department of Architecture and Planning, Massachusetts Institute of Technology, Cambridge MA. The authors are grateful to Hank Millon for enlightening comments on the drawing at an early moment in the project. Additional thanks go to James S. Ackerman, David Friedman, William J. Mitchell, John A. Pinto, Larry Sass and Svea Heinemann for their interest, ideas and expertise.

1. William Winthrop Kent, *The Life and Works of Baldassarre Peruzzi of Siena* (New York: Architectural Book Publishing, 1925), 37. Ironically, Kent failed to reproduce the drawing. It is not catalogued by Heinrich Würm, *Baldassarre Peruzzi: Architekturzeichnungen* (Tübingen: Wasmuth, 1984).

2. The collection also included a large project for St. Peter's by Peruzzi, now in the New York offices of the American Academy in Rome, and a lost master plan for the Villa Giulia in Rome by Vignola. See Kent, 85 and pl. 43; G. Phillips Stevens, "Notes on the Villa di Papa Giulio, Rome," *Journal of the American Institute of Architects* 2 (1914): 539-40, and Richard J. Tuttle, "Vignola and Villa Giulia: The White Drawing," *Casabella* 646 (June 1997): 50-69.

3. We are indebted to Hugh Shepley, FAIA, for help with the provenance, and to Robert Roche, archivist at Shepley, Bulfinch, Richardson and Abbott, for information about the firm and the drawing.

4. The original support bears the watermark of a six-pointed star under a smaller star. Not in Briquet, see David Woodward, *Catalogue of Watermarks in Italian Printed Maps ca 1540-1600* (Chicago: University of Chicago Press, 1996), n. 150.

5. The term "lumaca," which literally means "snail," was commonly used in Renaissance architectural parlance to refer to a spiral flight of stairs.

6. David R. Coffin, *The Villa in the Life of Renaissance Rome* (Princeton: Princeton University Press, 1979), 185-187.

7. A transcription reads: "la devotione che professo verso l'E[ccellenza] V[ost]ra] (non solo) miobliga a' parteciparla il m., e gratia ma anco per suplicarla (non . . .) la porgermi occas. di essercire (la) mia (dovuta) debo servita verso questi parti al . . . di tante obligationi che li devo, e mentre . . . sempre di l'onore . . ."

8. See Howard Burns, "Baldassarre Peruzzi and Sixteenth-Century Architectural Theory," in *Les traités d'architecture de la Renaissance*, ed. Jean Guillaume (Paris: Picard, 1988), 207-218.

9. See Sebastiano Serlio, *L'Architettura: Libri I-VII e Extraordinario nelle prime edizioni*, ed. Francesco Paolo Fiore (Milan: il Polifilo, 2001), vol. 2.

10. For examples, see the façades of the Palazzo del Podestà in Bologna, the Libreria di San Marco in Venice, and the Basilica in Vicenza as well as the courtyards of the Palazzo Venezia in Rome and the Farnese palaces in Rome and Piacenza.

11. Kent, 35-37, believed that the drawing was done in connection with a building commission in Bologna, an idea that will be discussed at proper length in a future study.

12. At the basilica of San Domenico in Bologna, for example, the seat backs of the Dossale del presbiterio (1528-30) measure 88 cm. by 49 cm. For illustrations, see V. Aloe, *Il Coro intarsiato di San Domenico in Bologna* (Bologna: Edizioni Studio domenicano, 2002).

Origins and Influences

Reflections on the Ground Rules of the Baroque

WERNER OECISLIN

(TRANSLATED BY MARK JARZOMBK)

When and where to place the beginning of “modern” art history and with which persons and points of view one might justify this placement is a topic about which one could argue at length. It seems plausible, however, that from the perspective of the turn of the twentieth century, claims to a new beginning would have been substantiated by the attempt to base art history in some way on reliable “scientific” foundations, on a set of ground rules, on “universal” principles or on recurring formal features. This belief dominated the views of art historians such as Heinrich Wölfflin, who formulated the problem toward the end of his introduction to his *Kunstgeschichtliche Grundbegriffe*: “To define the law of recurring formal features would be the main task ... of a scientifically-based art history.”¹ This, then, was no longer the humanistic or hermeneutical position that attempted to understand art as the result of the creative process, the manifold nature of that process, and the changes it brings about; such a position was superseded by the assumption “that in all change, law remains at work.”²

While the search for fundamental laws has left its own trail and traditions—as has the general concept of style—it had become by 1900 a method that far exceeded the textbook-like listing of “formalistic” elements such as capitals or arches. Style became an overarching quality, a *universalia* of art history. In his 1893 *Stilfragen*, Alois Riegl declared himself against “materialist” derivatives and positioned himself directly in opposition to Semper’s attempt to achieve a balance between, on the one hand, an in-depth investigation of individual art historical facts, and, on the other, the principles of lawful regularity (*Naturgesetzlichkeit*) guiding the artistic process. Describing Semper’s method as a form of Darwinism and as “art materialism,” Riegl argued for a comprehensive view that saw the “will to art” (or *Kunstwollen*) as part of a general stylistic concept.³ That Riegl’s view has affected modern architecture beyond Peter Behrens, insofar as it expressly took a stand against the imitation of styles in a search for a pure style, is well-known.⁴ Walter Gropius in his *Internationale Architektur* (1925) also wanted to see an end to the “formalistic trend” with its rapid turnover of “isms,” and hoped to replace that trend with what he called a “will to develop a unified world view with ‘objective validity.’”⁵ This “objective validity” would also extend to the “personal” and “national.” Of the “three concentric circles—individual—nation—humanity,” the last, for Gropius, was the most inclusive.⁶ Wölfflin proceeded less summarily. At the end of his *Kunstgeschichtliche Grundbegriffe*, which distinguished between external and internal art history as well as between developmental change and periodicity, he, too, broached the issue of national character: “However different national characters may be, the universally human—the elements that unite—are stronger than those that divide.”⁷ This claim was followed by an even more disarming and conciliatory sentence: “A constant balancing and adjustment takes place.”⁸

It is astonishing to realize to what degree so-called modern art history has served as godfather to modern art and architecture. Both searched at the time for a universal and fundamental concept of style. Both were more or less willing to accept the reduced importance of historical contexts. In the final analysis, then, it is no surprise that the option offered by the “classical”—although a risky term in the debate—gained the upper hand in establishing

the formal terms of modern architecture.”

Today, the convergence of Modernism and Classicism has long since been accepted. Yet even the apparently anti-modern reaction of Post-Modernism conducted its attack—as in 1980 in the “Strada Novissima” at the Venice Biennale—under the insignia of the arch-symbol of classical architecture, the column. And neither Charles Jenks nor Thomas Gordon Smith shy away from putting together the terms “postmodern” and “classical.”¹⁰ In the search for style-concepts (*Stilbegriffe*) and universals (*Allgemeingültigkeit*), one easily forgets that the most obvious problem appears to have been overlooked. This is surprising, for that selfsame search for valid concepts and categories—that general desire for objectivity—oriented itself, at least in the framework of art history, on its apparent opposite: the “Baroque.” This applies to Riegl, and even more so to Wölfflin and others. Karl Ernst Osthaus, mentor of so many moderns (Gropius and Le Corbusier included) held that “the Baroque style is the last great style of world history.”¹¹ In his *Grundzügen der Stilentwicklung*, he deliberately denied recognizing anything new in science all the while praising “living art,” and characterized his interest in holistic concepts as a search for “the unified weaves on the carpet of life.”¹² For Osthaus, the Baroque was the last unified style dedicated to weaving this so-called carpet of life, and was thus not part of the catalogue of “isms” with which Gropius wallpapered the enemy camp of the Modern. For Theo van Doesburg, another propagator of a new and objective world that was meant to be enthroned with the de Stijl movement, the terms “baroque,” “classical” and “modern” had a similarly universal significance, as one can see from the title of his 1921 pamphlet, *Classique-Baroque-Moderne*. And Le Corbusier, who found, in good French tradition, the Roman Baroque to be distasteful, nonetheless worshiped the artistic creativity of the father of the Baroque, Michelangelo: “Michelangelo is the hero of our last thousand years just as Phidias was for the preceding millennium.”¹³

A difficulty arises, however, within the framework of these definitions when the required regularity is not found. The difficulty was expressed by Riegl in his posthumously published lectures on Baroque art in Rome in which he initially appears almost desperate to come to grips with the phenomenon of the Baroque: “We do not understand the extraordinary quality that defines the Baroque, it is not convincing, it contains a contradiction, seems untrue; we therefore perceive it as miraculous.”¹⁴ He even admits being disturbed and irritated by praying figures that move in “unmotivated convulsing contortions,” leading him to conclude: “we do not understand this.”¹⁵ It seems that those reliable, rationally decipherable Baroque concepts might actually not exist at all. In the end, rather than entrust himself to such insecurities, Riegl preferred to find refuge in those Nordic-Protestant forms familiar to him.¹⁶

Wölfflin, who has no doubt rightfully entered history as the one who actually defined the modern concept of the Baroque, solved the problem in his own way. In his first dissertation, “Prolegomena zu einer Psychologie der Architektur” (1886), he faithfully documented an architectural itinerary, included abrupt changes of direction, and made no attempt to hide apparent difficulties.¹⁷ Working from the perspective of a psychological inquiry, he focused on “general formal laws,” the absolute significance of which, however, was again interrupted (much as in the later “Kunstgeschichtlichen Grundbegriffen”) by references to “stylistic forms,” “folk feeling” and “form feeling.” For already in 1886—seven years before Riegl’s dismissal of Semper—Wölfflin was deeply involved in the battle against the “materialistic nonsense” that explained the development of architectonic form as a consequence of necessary givens such as material, climate and purpose. He thought that such a “mechanistic point of view should be silenced.”

Seen from this perspective, it makes sense that Wölfflin, a little later in *Renaissance und Barock* (1888), should

have directed his search for “principles of lawful regularity” first towards that period of history—appearing under the heading “Disintegration of the Renaissance”—in which “randomness and arbitrariness” are mentioned specifically for the first time.¹⁸ Perhaps this amounted to “squaring the circle,” as it were. But in the “symptoms of disintegration” he described, Wölfflin apparently believed to have discerned a law “that might offer insight into the inner workings of art,” and along with this, “the actual end purpose of art history.”¹⁹ In other words, he was searching for a psychological understanding of the transition from Renaissance to Baroque, and furthermore, for the very principle of “law.” What Wölfflin attempted in *Renaissance und Barock* can be understood as a testing out of the approach he had taken back in 1886, except that as opposed to the usual, familiar psychologisms, he turned “to the general laws of form.”²⁰

If we look closer, it becomes evident that he was searching for the one but could not ignore the other, let alone abandon it. Artistic phenomena are manifestations of the soul and cannot be reduced to a line or a circle. Nonetheless, it must be remembered that in 1886, Wölfflin had already articulated an objective interpretation of art, which derived to no small degree from the aesthetics of Robert Vischer.²¹ Building on this tradition, he departed from the well-worn paths of a “psychology of architecture” and turned, rather abruptly and more assertively, to the “laws of form.”²² Only in the latter, so it seemed, did he expect reliable answers about the nature of art.

For research on Baroque art, this has yielded both advantages and disadvantages. What might appear, geometrically, so logical is not yet by any means the *differentia specifica* of artistic expression. The dichotomy, for example, between Renaissance and Baroque is not simply to be explained away by the contrast between straight and curved, no matter how popular this pairing has been ever since the idea of *ars oppositorum* was first developed in late medieval times. The idea lasted up until Eugène Grasset’s comprehensive theory of ornament, which was divided into the treatment of “rectilinear elements” and “curved elements”;²³ in the hands of Le Corbusier, these then took a distinct turn towards the respective geometrical bases of forms. Geometry may have proven its universal validity, and the *more geometrico* has demonstrated, and still demonstrates, the benefit of its logic in the arts. But this still does not explain what might be hidden behind the corresponding forms with respect to psychological or artistic motivations.

Wölfflin’s transition, which he so abruptly reveals in 1886—“I interrupt,” he writes. “Let us turn to the general laws of form”—pointed to a topic that was to remain hotly debated for a long time as it concerned the very nature of aesthetic understanding. Furthermore, the contrast in approach described above corresponded to the attempt, in contemporary academic debates, to differentiate between nomological and historical interpretations. Of course, that the difficulty lay in articulating a satisfactory methodology was hardly new at the time. Wölfflin’s 1886 *Prolegomena*—and even more so Riegl’s subsequent 1893 *Stilfragen*—had already been anticipated by Gottfried Semper’s “Prolegomena” to style in 1860.²⁴ Both had accused Semper of having fallen into the trap of “mechanism.” In reality, both Semper’s and Wölfflin’s “Prolegomena” share a longing for natural laws with respect to art and architecture. For Semper, this applied to symmetry, eurhythmy and direction, which he claimed bestowed to the facts of architecture their fundamental aesthetic significance and formal authority. For Wölfflin (his ideas originated from Semper’s colleague, Vischer), the “interior” and “exterior” determinants of form—such as “delineation in space,” “measure,” “balance,” “symmetry,” “proportion,” and “harmony”—all led to an objective contemplation of the architectural. Here, Wölfflin, admitted that he was well-acquainted with the corresponding explanations in Semper’s “Prolegomena.” On the one hand, he referred to Semper’s concept of eurhythmy as a “sequential regularity,” which led him not only to demand “regularity” but also “rules.”²⁵ On

the other hand, the rules of regularity led Wölfflin into “art psychology” and back out again to the concept of a historically grown feeling for form (or *Formgefühl*), to a reconsideration of generally accepted formal architectonic laws (such as the division into proportions or horizontal and vertical members) and, finally, to ornament.²⁶ Even Semper had not only argued against the “materialists” who had “welded the idea too firmly to the material,” but had, more constructively, incorporated the particular quality of the artistic into his theory of vision, thereby undermining both Wölfflin’s and Riegl’s reproaches.²⁷ Since to his mind the arts rose above “common tellurian Being” into “elevated spheres,” Semper had even drawn a comparison to religion on account of the urge to perfection.²⁸

This back and forth between facts, historical realities and their respective generalities (whether innate or attributed), was not so unusual. Wölfflin cited in this context Kant’s “Architektonik der Reinen Vernunft”²⁹—by which he meant, of course, that segment in the *Critique of Pure Reason* that starts with the sentence: “By architectonic, I mean to indicate the artfulness of systems.”³⁰ Wölfflin even brought in Virchow and drew upon his formulation: “form = inner purpose.”³¹ For us, these are indications that Wölfflin—even in the examples he took from the natural sciences—attempted to strip away those elements of art psychology that might be deemed unreliable, to reveal lawfulness and, even more concretely, to arrive at an ideal approach: “to work with exactitude.” Of course, he did not want to achieve this by reducing himself to the merely factual: “A history that restricts itself only to stating what happened sequentially cannot prevail; it would deceive itself if it believes that in doing so it has been ‘exact.’”³² Consider in this respect Wölfflin’s comment that “One should only focus exactly there where it is possible to catch the stream of appearances in fixed forms.”³³ While this may sound tautological, it moves Wölfflin beyond a narrowly logical stand and brings him once again to a psychology of art, albeit in reformed guise. What follows is the Wölfflinian grasp for “mechanics,” which is explained this way: “Fixed forms are revealed to physics, for example, through mechanics. The humanistic sciences still lack this foundation; it can only be found in psychology.”³⁴ Here, just as mechanics does for physics, psychology is given the task of establishing a scientific foundation for art history: “[Psychology] would likewise allow art history to base the individual on universal law.”³⁵ Behind this expectation hides yet a bolder thesis, according to which it is proven that “the organization of the human body is the constant throughout all change,” and consequently “the uniformity of its organization also guarantees the uniformity of the Feeling for Form.”³⁶ In short, to make art historical and cultural statements scientifically solid, one has to place one’s trust in a universally valid human nature.

In *Renaissance und Barock*, these convictions are applied to art historical praxis. “Throughout, we presume a physical presence that conforms to ours,” he writes, for example, in the chapter entitled “On the Foundations of Stylistic Change,” and so attempts on the basis of this analogy to determine the “form fantasy” of the artist.³⁷ In so doing, Wölfflin approaches the “form feeling of an epoch” by way of “easily controllable psychological facts.” The artist has, in such a psychologically charged field, no other choice than to interpret the artistic as, or to raise it to, an idealized realm, to “that which man would like to be.”³⁸

Wölfflin’s beliefs—his concept of style, his emphasis on proportions (these followed Friedrich Thiersch)—were readily accepted by the architects of his generation, the very ones who, along with Riegl and Behrens, accused Semper of mechanism. But Wölfflin’s psychologically-based notion of “form-feeling” is, even in his own wishful imagination, just as mechanical as any of Semper’s cultural historical typecasting. Indeed, one could argue that Semper’s formulations—for example, when he tries to find a carefully nuanced formula for the “principle of clothing” based on “a structural-symbolical scheme rather than a structural-technological one”³⁹—are frequently

more differentiated than what Wölfflin tried to demonstrate by means of his analogy between what mechanics does for physics and what psychology does for art history. Yet no one has ever reproached him for this analogy. Besides, how many of the anti-Semperians have actually read him? When, at a later date, another art historian wanted yet again to borrow concepts from the natural sciences, the borders were drawn differently, and a new storm of indignation rose. Hans Sedlmayer in his study of Borromini not only drew on a "Cartesian world view" and on Kretschmer's psycho-physical structural types, but also on Lavoisier and his "new chemistry." This was going overboard, methodologically speaking, although Sedlmayer claimed that all he wanted to create was a "formal conceptual model."⁴⁰ Sedlmayer's chapter on the "Psychology of Borromini" has been described by Anthony Blunt, perhaps in slightly exaggerated terms, as an ingenious if perverse Freudian analysis.⁴¹ One wonders if this prominent critic actually read either Freud or Sedlmayer, and if so, whether he understood or wanted to understand either one.

What is clear is that taken together, these more or less trumped up controversies involve psychological perspectives on art. While accusations of dogmatism were made, all basically agreed that dogmatism could hardly lead to a clarification of historical facts. Some acknowledged the speculative character of their cited models while others thought they were excessive: "Comparative description," "genetic" representation, "structural analysis"! The transitions between such models were fluid. To what extent insights gained from prior interpretations could be applied to those that followed was likely the real cause of dissent. This is hardly surprising, in view of a truly demanding epistemological question that goes to the heart of intellectual endeavors. It is no doubt because of interpretive finesse that the much longed for ground rules for art do not obliterate history altogether! Wittkower's *facit*, which appeared in his 1931 *Kritik der Kritik* yet did not resolve the Borromini debate, sounded as follows: "Theoretical nitpicking obstructs access to the individual work."⁴² This also applies to Wölfflin, Semper and other art historians. Wittkower saw such theoretical nitpicking as "a reversal of the ... desired aim." While this may be true, one may be left to wonder—indeed, should wonder—what happens when one moves beyond the single work of art to something more fundamental.

Wittkower was caught up in that question as well. When he examined the purely theoretical issue of how to generalize in geometrical terms the proportional arrangement of Palladian architecture, sharp criticism was unavoidable—although he did not go to the same extremes as his student Colin Rowe, who went so far in his generalization as to draw Le Corbusier's villas into direct comparison with Palladio's and, in so doing, helped—by way of "proof"—to crown modern architecture with the "classical."⁴³ The larger context of this history—namely, the universal declaration of geometrical laws as well as basic rules and their application in the "*Lex Thierschiana*" (which was also used by Wölfflin as a point of departure for his studies of proportion, and which was known to Le Corbusier although he did not admit this)—were barely of interest to him. This proves how much the search for ground rules—itsself a generalization—emerges from a complex history.

As for the psychological question, Wittkower dealt with it in other contexts—not as a comprehensive principle that gave the concept of style a sense of aliveness (as with Wölfflin), but as a contextual enlargement for the analysis of individual works of art. In 1931, Wittkower saw the "psychological architectural mindset" as Bernini's "very own domain," a correct characterization, by the way, if one relies on one of Bernini's rare moments of self-observation, the Milano testimony with its correspondingly revelatory remarks.⁴⁴ Here, the encounter with reality leads one to understand that psychology, for the art historian, is related above all to sensory perception. It is somewhere between all these positions that art and architectural history has maneuvered, albeit without, for the

most part, paying heed to the fundamental considerations that were, and are, connected to them. To have done so would have been the best way to come closer to the truth, particularly if the aim is to navigate the minefield between, on the one hand, the front presented by purely factual recitation, and, on the other, the overly hasty capitulation to principles and laws. In the best of intellectual traditions, this double point of view—the nomological and the historical—has been postulated as the necessary and correct approach to holistic inquiry. In this regard, the “baroque object” is in the end an idealized folly, because the unilateralness and inadequacy of the “one method” that is juxtaposed to it comes clearly into focus. What matters are the shades that lie in between the extremes posited by the venerable *ars oppositorium*; conjecture points in the right direction. In this way, knowledge approaches reality. This was already made clear by Angelo Poliziano in his “Panepistemon” and the three possibilities or “genera doctrinarum” among humans that it elaborated, namely the “Inspiratum,” the “Inventum,” and the “Mixtum.” To recognize this is not all that simple, but becomes essential in the Baroque context. So the baroque-skeptic, Jakob Burckhardt, declared to his teacher Franz Kugler during his journey to Varallo on August 5, 1857, in a statement that now seems quite understandable to us: “I would like at least once in my lifetime to see, so that I can believe, the *mixtum compositum* of sculpture and painting that Gaudenzio Ferrari has propounded there.”⁴⁵ To transform a matter of belief into a rational statement is by no means easy! Art history has often floundered on this, especially where the Baroque is concerned.⁴⁶ For this reason alone, we continue to face an exciting and challenging task.

1. Heinrich Wölfflin, *Kunstgeschichtliche Grundbegriffe – Das Problem der Stilentwicklung in der neueren Kunst* (Munich, 1915), 19. This view of modern art history is reiterated by Lorenz Dittmann, *Stil, Symbol, Struktur – Studien zu Kategorien der Kunstgeschichte* (Munich, 1967), 52, who draws attention to this citation.

2. Wölfflin (1915), 19.

3. Alois Riegl, *Stilfragen – Grundlegungen zu einer Geschichte der Ornamentik* (Berlin, 1893), v ff.

4. See Peter Behrens, “Über den Zusammenhang des baukünstlerischen Schaffens mit der Technik,” in *Kongress für Ästhetik und Allgemeine Kunstwissenschaft Berlin 7-9 Oct. 1913* (Stuttgart, 1914), 251ff. See also Werner Oechslin, *Otto Wagner, Adolf Loos, and the Road to Modern Architecture* (Ger. ed. 1994; Cambridge, 2002), 75 ff. Opinion continues to be divided on whether art historical causalities and their consequences could be applied to the present. Consider the case of Rudolf Wittkower and Colin Rowe, which was exemplified by Henry Millon in one of his well-known studies. Henry Millon preferred, just like his teacher Wittkower, to stay with history rather than offer ungrounded generalizations or turn to contemporary developments as the foundation for arguments. This general skepticism of causalities is the reason for which the following essay is dedicated to him.

5. Walter Gropius, *Internationale Architektur* (1925, Passau, 1927), 6 ff.

6. *Ibid.*, 7.

7. Wölfflin (1915), 250.

8. *Ibid.*, 250.

9. See Werner Oechslin, “Klassisch und modern: Um 1933,” in Wolf-Dieter Heilmeyer, ed., *Die griechische Klassik – Idee oder Wirklichkeit* (Berlin/Bonn, 2002), 61 ff.

10. See Charles Jencks, “The New Classicism and its Emergent Rules,” *Architectural Design Profile* 71 (1988), 23 ff. “The third phase of Post-Modernism, which started in the late 1970s, has led to a new form of classicism, a free-style rather than canonic version of the traditional language.” How generously the term “classical” was used can be seen in Thomas Gordon Smith, “Classical Architecture, Rule and Invention” (1988), in which Frank Lloyd Wright, Borromini, Guarini and Dientzenhofer are all included because they used the capital and column.

11. Karl Ernst Osthaus, *Grundzüge der Stilentwicklung* (Hagen, 1919), 69.

12. *Ibid.*, 7.

13. Le Corbusier, *Vers une architecture* (1921; Paris, 1924), 133.

14. Alois Riegl, *Die Entstehung der Barockkunst in Rom* (Vienna, 1908), 3.

15. *Ibid.*, 3.

16. *Ibid.*, 3-4.

17. See Heinrich Wölfflin, *Prolegomena zu einer Psychologie der Architektur* (Munich, 1886). See also Werner Oechslin, “Prolegomenaan – Stelle und in Erweiterung erster Sätze,” *Schöpfung* 3 (2004): 25 ff.

18. Heinrich Wölfflin, *Renaissance und Barock – Eine Untersuchung über Wesen und Entstehung des Barockstils in Italien* (Munich, 1888), v.
19. *Ibid.*, v.
20. Cf. Wölfflin (1886), 19. Shortly before this, he explains: “Doch ich breche diese Betrachtungen ab.” A similar stage direction can be found on 12: “Wir ziehen uns zurück. Im Folgenden werden wir keine Rücksicht mehr nehmen auf diese Schwierigkeiten, sondern die herkömmlichen bequemen Ausdrücke auch unsererseits gebrauchen.”
21. *Ibid.*, 19 ff.
22. *Ibid.*, 19.
23. See Eugène Grasset, *Méthode de Composition Ornamentale* (Paris, 1905), 2 vols.
24. Gottfried Semper, *Der Stil in den technischen und tektonischen Künsten, oder Praktische Aesthetik* (Frankfurt, 1860), vol. 1, v ff. See also Werner Oechslin, “Prolegomena zu einem verbesserten Verständnis des Semper-schen Kosmos,” in Winfried Nerdinger, Werner Oechslin, eds., *Gottfried Semper 1803-1879 – Architektur und Wissenschaft* (Munich-Zürich, 2003), 53 ff.
25. Wölfflin (1886), 34.
26. In *Ibid.*, 40, Wölfflin introduced this as follows: “Nur mit Mühe hat bisher die Fortierung des Ornaments zurückgeschoben werden können.”
27. Semper (1860), vol. 1, xiv.
28. *Ibid.*, xvi-xvii, n. 1.
29. Wölfflin (1886), 26.
30. See Immanuel Kant, *Critik der reinen Vernunft* (Riga, 1781), 832. “Der Transcendentalen Methodenlehre Drittes Hauptstück – Die Architectonik der reinen Vernunft.”
31. Wölfflin (1886), 24, where we find the surprising remark: “Diese Sätze stammen von Virchow. Man kann sie unmittelbar in die Aesthetik herubenehmen.”
32. *Ibid.*, 48.
33. *Ibid.*, 48.
34. *Ibid.*, 48 ff.
35. *Ibid.*, 49.
36. *Ibid.*, 49.
37. Wölfflin (1888), 63.
38. *Ibid.*, 63.
39. Semper (1860), vol. 1, 220.
40. See Hans Sedlmayr, *Die Architektur Borrominis* (2nd ed., Munich, 1939), 133. The incriminating sentence reads as follows: “Wie ein Lavoisier die chemischen ‘Körper’ aus ‘Elementen’ bestehen ‘sieht’, so sieht ein Borromini die architektonischen aus Reliefelementen zusammengesetzt.”
41. Anthony Blunt, *Borromini* (London, 1979), 221. See also Werner Oechslin, “Borromini e l’incompresa ‘intelligenza’ della sua architettura – 350 anni di interpretazioni e ricerche,” in Richard Bösel, Christoph L. Frommel, eds., *Borromini e l’universo barocco* (Milan, 1999), 107 ff.
42. See Rudolf Wittkower, “Zu Hans Sedlmayrs Besprechung von E. Coudenhove-Kalergi – Carlo Fontana,” *Kritische Berichte zur kunstgeschichtlichen Literatur* 1 (1931/32), 145.
43. See Werner Oechslin, “C’est du Palladio” – “Un avvicinamento al fenomeno del Palladianesimo” *Palladio nel Nord Europa – Libri, viaggiatori, architetti* (Milan, 1999), 65 ff.
44. See Wittkower (1931/32), 144.
45. See Jacob Burckhardt, *Briefe* (Basel, 1955), vol. 3, 268.
46. Here I would like to refer to the ‘baroque’ foundations of rational explanations, see Werner Oechslin, “Quantum homini licet. ‘Aesthetik’ zu heilsgeschichtlichen Bedingungen” in Sebastian Schutze, ed., *Estetica Barocca – Akten des Kongresses Rom 2002* (in publication).

Benjamin's Baroque

MICHAEL OSMAN

For interpreters of Walter Benjamin, the theory of allegory presented in *The Origin of German Tragic Drama* (1925) presages ideas appearing in his later writings on such modern subjects as the poetry of Charles Baudelaire, the Paris arcades and Brechtian theater.¹ For instance, a prominent cultural historian like Susan Buck-Morss draws a direct analogy between the role the ruin plays in German Baroque *Trauerspiel* and the decay it comes to represent in the visual culture of the late nineteenth century:

And just as the Baroque dramatists saw in the ruin not only the "highly meaningful fragment," but also the objective determinate for their own poetic construction, the elements of which were never unified into a seamless whole, so Benjamin employed the most modern method of montage in order to construct out of the decaying fragments of nineteenth century culture images that made visible the "jagged line of demarcation between physical nature and meaning."²

Here, Benjamin's description of modernity aligns itself with the poetic compositional structures of German Baroque playwrights—the result being that his "method of montage" makes apparent the ambiguous relationship between the experienced world and its semantic representation. Buck-Morss's insistence on seeing one historical period through the lens of another resurfaces later, when she equates the tragic impact of the Thirty Years War (1618-1648) and the psychological trauma of World War I in order to posit Benjamin's nascent engagement with the capacity of a literary mode like allegory to address the nostalgia presumably inherent in modernity.³ Given the notable interest expressed by Benjamin's critics in the problem of modernity, few scholars have situated his study of the *Trauerspiel* in the context of its own historical period—that is, the Baroque. This essay will investigate how the theses developed in Benjamin's book—on allegory, melancholia, and the theatre itself—are historically appropriate means of understanding the design, mechanics, and broader cultural relevance of German Baroque scenography. I begin by underscoring how the semantic performance of allegory, as Benjamin theorizes it, is in fact conjured up by the stage mechanics of the Baroque *Trauerspiel*. I then turn to the work of a German scenographer, Joseph Furttenbach (1591-1667), and his treatise on stage design to illustrate the effectiveness of Benjamin's theory in explaining the visual aspect of Baroque theater. I conclude with some remarks on the allegorical figure of melancholia, in whose spirit Baroque mourning plays were composed, and who represented, for Benjamin, the ideal viewer of an intense and crude theater tradition.

Any arguments for the historical validity of Benjamin's theories must be based first on his own title, which insists on seeing *Trauerspiel* through its origin (or *Ursprung*) as opposed to its genesis (or *Entstehung*). In contrast to the necessarily forward movement of creation implied by genesis, origin, as he sees it, is a momentary and recognizable suspension between the past and the future. This idea, which lies at the heart of that which Benjamin goes on to call natural history, is clearly explained by Samuel Weber's summary of the concept as "not the history of nature but history *as* nature." This, he claims, is "the discreet, discontinuous, un-genetic aspect of the origin

... entirely incompatible with any sort of linear or dialectical development."⁴ Like phenomena in nature, then, natural history maintains a quality of becoming in being. When seen in this way, the *Trauerspiel* absorbs both past and future into its history, so that origin is just as concerned with beginnings as it is with ends, and hence no longer isolated from the "world of ideas" by which it should properly be surrounded.

The very structure of Benjamin's book speaks to this idea. The "Epistemo-Critical Prologue," in which methodology is outlined, serves to justify a two-part organization: the first section, "*Trauerspiel* and Tragedy," focuses on past traditions by drawing the distinction between the poetics of Classical drama and those of German Baroque drama; and the second section, "*Trauerspiel* and Allegory," turns to future discussions by elaborating a Romanticist theory of allegory to conceptualize the *Trauerspiel* while setting it in its proper seventeenth-century context. Both these sections, then, attempt to address the *Trauerspiel* through its origin, which, as Benjamin writes in his prologue,

although an entirely historical category, has, nevertheless, nothing to do with genesis. The term origin is not intended to describe the process by which the existent came into being, but rather to describe that which emerges from a process of becoming and disappearance. Origin is an eddy in the stream of becoming, and in its current it swallows the material involved in the process of genesis.⁵

By means of the metaphorical framing—current, stream, eddy—of becoming and disappearance, origin emerges; it appears as a distinct moment absorbing everything around it only to be reabsorbed into the larger whole.⁶ This approach to describing the origin of the *Trauerspiel* supports Benjamin's decision to divide his book into two histories: the first half deals with that which came before the *Trauerspiel* (Classical drama), while the second deals with that which follows (Romanticism). This kind of historical temporality is justified, to Benjamin's mind, through the invocation of the philosophy of a properly Baroque figure: Gottfried Wilhelm Leibniz and his *Monadology* (1714) to which Benjamin turns in order to clarify his approach. According to Leibniz, a monad is a substance without parts. Yet each monad, even in its essential simplicity, contains the infinite multiplicity of all other monads—and for Benjamin these are like the objects of natural history in that they, too, are intricately interrelated to one another.⁷ What underlies Leibniz's theory is a conviction that all ideas are essentially bound together through a common unified spirit. Similarly, what emerges from Benjamin's natural history of the *Trauerspiel* is an abbreviated "image of the world" and the totality of ideas it reflects.⁸

The historical image of the *Trauerspiel* begins to unfold in the first half of the book in which Benjamin categorically rejects a type of scholarship that employs the dramatic treatises of the Baroque period in Germany as templates for reading the structure of the *Trauerspiel*. These treatises are largely based on Aristotle's *Poetics*. Yet Benjamin maintains that their influence on the plays of such Baroque writers as Andreas Gryphius (1616-1664), David Caspers von Lohenstein (1635-83) and Johann Christian Hallmann (1664-1702) is quite insignificant once their composition, plot, and staging are thoroughly explored. For example, the hero of Classical tragedy typically derives his tragic stature from rank and myth, whereas in the *Trauerspiel* the sovereign emerges as the main character because he is the "principal exponent of history" and serves "as its incarnation."⁹ Insofar as the ruler, the holder of absolute power, functioned as the representation of history in this period, his historical life inevitably defined the narrative content of the play. As opposed to the divine mythology of Classical tragedy, in which fate determines the outcome of things, the plot of Baroque drama remains decidedly immanent in that its narrative power rests entirely on the quotidian events of the sovereign's life. The *Trauerspiel* places the history appearing all around it into dramatic relief. This turn to daily existence—albeit in a grandiose royal context—provides

some explanation for why seventeenth-century playwrights preferred to dwell on the details of court intrigue rather than on the eschatological questions governing the Classical stage.¹⁰ Furthermore, the preference can be brought to bear on political analyses of the period; Carl Schmitt's observation that the immanent possibility of catastrophe that haunted much of Counter-Reformation Europe is confirmed, according to Benjamin, by the dramaturgical idealization of political stability characterizing many of the *Trauerspiel*.¹¹

The immanence of Baroque drama becomes further emphasized in the second half of the book in which Benjamin addresses the *Trauerspiel* through its use of allegory. This was a rhetorical form that had been largely dismissed, to his mind, by Romantic aesthetic theory. While this might have been the case (and a whole body of literary criticism from Tzvetan Todorov to Paul de Man continues the debate), Benjamin nonetheless depends for his theory of allegory on the first volume of Georg Friedrich Creuzer's *Mythologie* (1810) in which the Romantic philologist characterized the experience of the symbol as a "momentary totality" and the experience of allegory as a "progression in a series of moments."¹² According to Creuzer, symbolic representation is understood as a sudden illumination of an embodied idea, as an object whose form *is* its content. Allegorical representation, by contrast, requires a semantic substitution in order to access its meaning, extending the temporal dimension of the aesthetic experience. If Romanticism generally dismissed allegory as inauthentic on this basis, it was precisely because it was neither instantaneous nor self-sufficient and thus revealed its semiotic nature too easily.¹³ For Benjamin, however, the movement inherent in allegory between form and content was a most appropriate means for describing how the writers of the *Trauerspiel* pursued their interest in history, intrigue and artifice. Time in these dramas, as we learn in the first part of Benjamin's book, progressed according to events in the life of the sovereign, making the site of the royal court the most natural setting for a narrative to unfold. Lohenstein, in the preface to his play *Sophonisbe*, confirms this preference: "Nowhere are action and setting richer than in the life of those whose element is the court."¹⁴ That richness implies a complex temporality rather than an instantaneous clarity, and makes allegory a potentially ideal vehicle for the transmission of meaning. Because allegory unfolds through time, and thus accumulates a whole series of meanings, it presents its interpreter with a multiplicity of semantic levels. These levels are, to Benjamin, like stage sets—and this is the compelling part of the argument—in front of which the stately content of the *Trauerspiel* works to collapse history into the scenographic artifice of a spatial image.¹⁵ Benjamin explains:

Whereas in the symbol destruction is idealized and the transfigured face of nature is fleetingly revealed in light of redemption, in allegory the observer is confronted with the *facies hippocratica* of history as a petrified primordial landscape. Everything about history that, from the very beginning, has been untimely, sorrowful, unsuccessful, is expressed in a face—or rather in a death's head. And although such a thing lacks all "symbolic" freedom of expression, all classical proportion, all humanity—nevertheless, this is the form in which man's subjection to nature is most obvious and it significantly gives rise not only to the enigmatic question of the nature of human existence as such, but also of the biographical historicity of the individual. This is the heart of the allegorical way of seeing, of the Baroque ...¹⁶

What is of interest here is the specifically Baroque image of a landscape of history that develops through allegory. From the vantage point of a period observer, the historical unraveling brought about through allegory became a visual and spatial experience. Simultaneously, the dramatic effect of the narrative denied any sense of historical fulfillment by exposing, through the biographies of even the greatest princes and monarchs, their shortcomings

and human flaws. At stake here, then, is an allegorical definition of the human experience we call history, whose “Hippocratic countenance” proffers a “petrified primordial landscape” to its viewer. Benjamin’s allegorical image of history is that of a face encountering death—confronting that dramatic if inevitable moment when all hope is lost and disclosing, in the process, human powerlessness in the face, as it were, of nature’s vitality. As opposed to the symbol’s “fleeting” transfiguration and redemption of nature, allegory, whose multiple meanings are difficult and ambiguous in great part because of its dependence on the visual, becomes the rhetorical mode of choice for exposing the image of history’s futility.

This preference for allegory over the symbol was, for Benjamin, a distinctive feature of Baroque literary production—as was a reliance on images. He notes that even in the printed manuscripts of the period “both externally and stylistically—in the extreme character of the typographical arrangement and in the use of highly charged metaphors—the written word tends towards the visual.”¹⁷ Benjamin was hardly the first to underscore this tendency; as he points out, a whole generation of turn of the century scholars discussed allegory’s risky engagement with visual representation. For example, he cites Carl Horst’s *Barockprobleme* (1912), in which an allegory is revealed as “a ‘crossing of the borders of a different mode,’ an advance of the plastic arts into the territory of the ‘rhetorical’ arts.”¹⁸ But it was precisely allegory’s visual capacities that prompted the playwrights and scenographers of the *Trauerspiel* to merge the temporal dimension of the narrative word with the spatial extension of the allegorical image into a singular theatrical experience.

The theorization of allegory and its implied use in the *Trauerspiel* notwithstanding, Benjamin does not explicitly address how allegory might have materialized in actual stage settings. Instead, he describes the scene through the metaphor of ruin: “In the ruin history has physically merged into the setting. And in this guise history does not assume the form of the process of an eternal life so much as that of irresistible decay. ... Allegories are, in the realm of thoughts, what ruins are in the realm of things.”¹⁹ The decaying quality of the ruin—a fragment of what was once whole—records the inevitable progress of time, making it the most fitting material analogue to the incomplete and continuously deferred meaning associated with the allegorical process. To apply Benjamin’s analysis of such a process to the complex design of stage settings makes clear how the latter coincide with the literary effect of allegory. By means of an allegorical conception of the art of scenography, in other words, the Baroque stage can be seen as the visual mechanism by which a rhetorical device is activated.²⁰ The three-dimensional settings of the *Trauerspiel* make apparent the rhetorical difficulty of allegory; that is, they make visually present, in the form of a ruin, the idea of the hopelessness of history that is, according to Benjamin, integral to the Baroque.

This conflation of allegory, history, and the ruin—and their materialization in the stage setting—is supported by what we know of German Baroque scenic mechanics: the manipulation of perspectival effects, the recession of painted scenes, the use of moving machines, and the reliance on lighting and sound effects. Indeed, German Baroque scenography was so intricately conceived that it was hardly ever confined to a single unchanging backdrop. Instead, stage designers like Joseph Furtenbach opted to produce at least two completely disparate scenes that could be switched with great speed along with moving machines as well as light and sound effects in order to mesmerize their audiences through an elaborate spectacle. Furtenbach’s designs were not entirely his own invention; they were informed by a century of architectural innovations on the Italian Renaissance stage.²¹ Having spent ten years in Italy before the Thirty Years War, he had accumulated notes on a variety of theatrical events. In Milan, he attended a festival where he first observed the use of fireworks.²² In Rome, he measured the Colosseum, closely examined the Theater of Marcellus, and took note of the scenic ornaments of formal gardens.

All this, along with a short description of the Medici Theater in Florence, was collected in his *Newes Itinerarium Italiae* of 1627.²³ These experiences so deeply influenced Furttenbach that he applied his acquired knowledge to the design for a theater in Ulm (1640-1641) that is documented in his last treatise: *The Noble Mirror of Art* (*Alamhaffter Kunstspiegel*).

In Ulm, where he had been appointed city architect, Furttenbach designed a stage with machines that could transform a city street into a country lane at a given musical cue (Fig. 1).²⁴ In order to make the change occur as quickly as possible, he designed rotating triangular prisms called *periaktoi*, which were painted on two sides, each representing a different scene.²⁵ Placed directly behind the proscenium walls, the *perioktoi* were erected in two sets of five (three primary and two secondary) on either side of the stage. These receded perspectively both in plan and in section, and generated a three-dimensional painted setting for the action of the play. His plans indicate two and a half foot "streets" (or *Gassen*), which could function as wings through which the actors could enter and exit; these were located between the five-foot surfaces of the six primary *periaktoi*, which were painted to look like building facades (Fig. 2).²⁶ The corners of the four secondary *periaktoi*, behind those facing the stage, met the corners of the painted panels to give the illusion that they were in fact three-dimensional buildings. When the *periaktoi* were reoriented from their original configuration as exterior corners of buildings into interior corners of hedges, the town miraculously transformed into a garden (Fig. 3).

In 1640, a certain Herr Merchius staged a performance in Furttenbach's theater that dramatized the life of Moses and the delivery of the Israelite people from Egypt. According to Furttenbach, "the production used 120 people, lasted for six hours, and presented three principal changes of scene."²⁷ In addition to the turning prisms and a variety of painted backdrops, Furttenbach also designed and constructed fourteen machines that appeared on the stage during performances (Fig. 4, Pl. 4). Among them was a cloud machine containing a room that could be lowered onto the stage and then raised again while carrying actors playing Jesus and singing angels. There was also a box called a "glory"; here, four candles and a round double glass filled with red-colored water were set on top of a miniature model of Mount Sinai. In the darkness of the theater's interior, the light emanating from the box purportedly appeared as blinding as that of the sun, and was meant to inspire deep spiritual feelings in the audience. Furttenbach describes the scene in the following way:

Now when the time comes in the play when the Lord God speaks from the heavens to Moses to the accompaniment of thunder and lightning and the sound of the trumpet, then the door is drawn up and the sun is turned a little to the right and then a little to the left to send a beautiful splendor with shimmering beams toward the spectators, causing them great wonder. This *glory* will serve for many other actions besides Mount Sinai and the lover of such things will produce great delight with it.²⁸

In its coordination of light, sound and motion, the *glory* was meant to enrapture the audience. To further impress spectators, Furttenbach designed wave machines mimicking the motion of water. When used in sequence, still, sliding, violent and upstanding waves allowed Moses to command the parting of the Red Sea. Furttenbach's treatise includes the description of machines for other plays with biblical subject matter; we learn of Jonah's ship and a whale with a moveable mouth wide enough to "swallow" Jonah. Each of these machines are, in effect, miniature stages moving or floating through the greater perspectival space of the stage. As opposed to Aristotle's condition that in "tragedy it is not possible to imitate many parts of the action being carried on simultaneously," these machines work to undermine the ideal unity of place, producing an elaborately fragmented scene portrayed

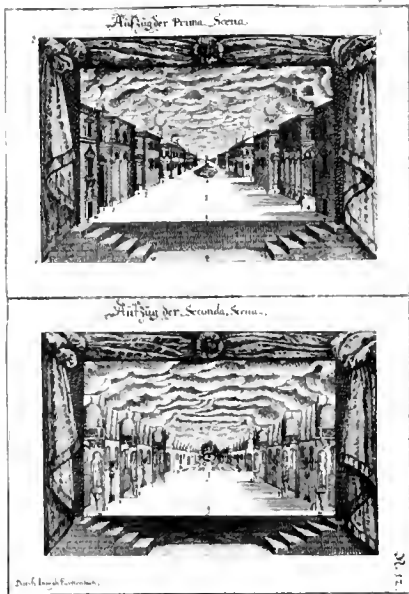


Figure 1. Stage sets with *periakti*,
Mannhafter Kunstspiegel (1663), Plate 12.

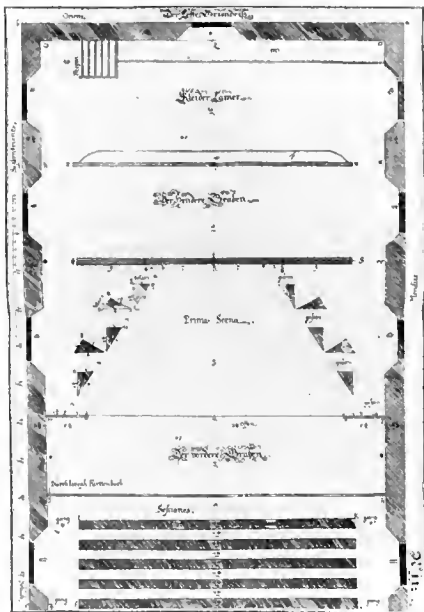


Figure 2. *Periakti* at the theater in Ulm,
Mannhafter Kunstspiegel (1663), Plate 11.

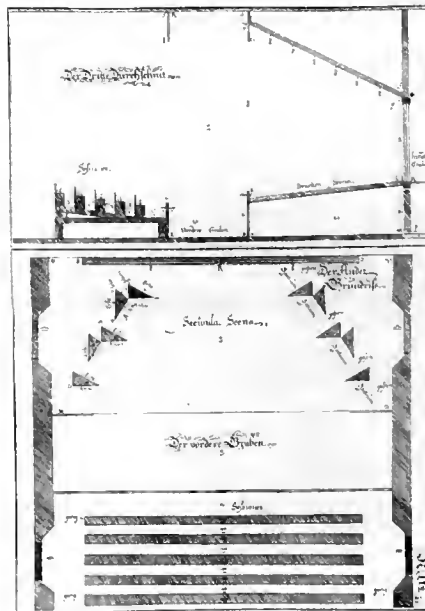


Figure 3. *Periakti*, second configuration,
Mannhafter Kunstspiegel (1663), Plate 11 1/2.

by Benjamin in the idea of the ruin.²⁹ When measured against the scale of the stage in Ulm, the machines are large enough to transgress the rules of linear perspective that guided the overall design of the stage. As such, they divide the stage into multiple and discrete spaces, each with an autonomous interior: the whale's mouth into which Jonah is swallowed, the space inside the "glory" into which the double glass is placed, or the platform within the cloud machine where Jesus and the angels sing. These secondary spaces may never fully destroy the perspectival integrity of the greater whole. Yet they visually enact the potentially disruptive effect of allegory by literally presenting, within the unity proffered by a perspectival setting, a multiplicity of theatrical spaces that emerge successively and that mirror, by virtue of changing scenic mechanics, the unfolding of allegorical meaning in the play.

The design and mechanics of Furttenbach's stage, then, operate in much the same way as Benjamin's description of the narrative complexity of the *Trauerspiel* as "built up in the manner of terraces."³⁰ For example, Benjamin points to the custom of the double title of such plays as Hallman's *Adonis und Rosibella*, whose structure introduces subject matter and then allegorical content. The subject matter is simply given by the names of the characters in love, "Adonis and Rosibella," while the allegorical content that follows summarizes the meaning underlying the events, "the significance of love and its triumph over death." Benjamin calls these allegories "captions" to the nominal title.³¹ Throughout the dialogue of the play new captions appear in the dialogue bearing witness to an allegorical meaning that continuously surfaces as part of the visual setting. For Benjamin, these captions are as textual as they are imagistic, in that they function on stage "as if they properly belong beneath an allegorical engraving."³² The machines described above can likewise be understood as "captions" to the overall design of the setting. Just as the spoken prose grows in repetitive complexity, each "layer" of architectural and mechanical artifice adds to the intricacy of form and functionality of the physical stage. In this context, the dense prose of the *Trauerspiel* is set within a space designed to create a perspectival illusion that is always being compromised by a series of moving machines, enacting divine, magnificent and often magical sideshows. Benjamin's explication of the effect of allegory in these plays, which push towards narrative fragmentation, is mirrored by an accumulation of objects in the visual spectacle.

What we might call the fragments of Baroque scenography—*perioktoi*, machines, backdrops, and light and sound effects, each with their own theatrical and spatial consequences—compete with the visual power of one-point perspective for the audience's attention. It was in the latter that Furttenbach saw the source of theatrical euphoria. He wrote in the following terms about the epiphanic effect of perspectival illusion on the spectator:

What a splendid moving thing is a perspective scene in a theater. The perspective lines carry the eye so well in the distance that not only the ordinary spectator, but the master himself will be carried away against his will and be astonished and entranced. Perspective presents such a lovely new world that even a melancholy spirit would be refreshed, strengthened, and persuaded to a longer life.³³

The precise geometry of lines converging into the distance entice the viewer's gaze "against his will" and towards the action taking place on stage. But who is this viewer? There are the "ordinary spectators," but the "master" of whom Furttenbach writes refers to the "Princes, Dukes, and Electors, who are fond of having such plays presented" and who often sponsored them as celebratory events for their courts.³⁴ It is likely only the latter who are privileged enough to possess a "melancholy spirit"—that is, a spirit susceptible to being overwhelmed by a visual entrance into the illusionistic depth of the mechanized stage and thereby overcome by a spectacle that causes the loss of one's grasp of reality.

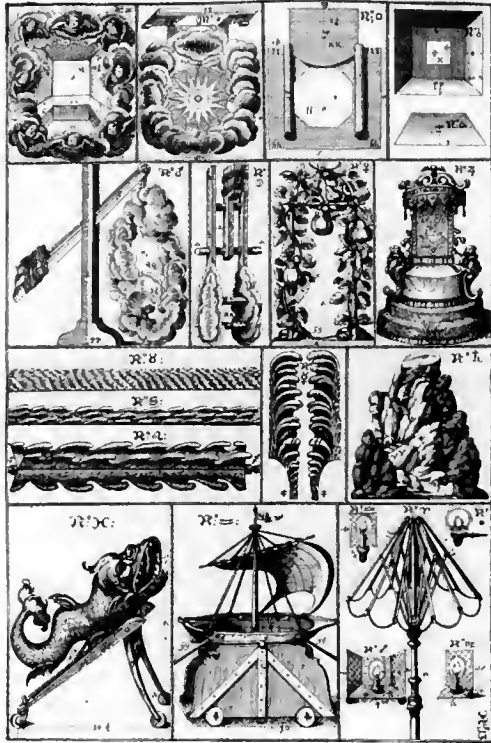


Figure 4 Table of machines for the theater in Ulm, *Mannhafter Kunstspiegel* (1663), Plate 13. From top left to bottom right: "Glory" for the appearance of the Heavenly Host; cloud machine for the "Glory of Mount Sinai;" back view of shutter in the cloud machine; wooden box lined with brass foil used as a reflector for the "Glory of Mount Sinai;" cloud for the appearance of "a destroying angel;" cloud for the angel who prevents Abraham's sacrifice; the bower with gourds for the Jonah play; Pharaoh's throne; three waves—on top is the wave board for a quiet sea, in the center the wave board for a rough sea, and on the bottom the roller for a large wave; two standing waves; Mount Sinai; the whale who swallowed Jonah; Jonah's ship; a parasol frame used in the scene with the "burning bush of fire" along with different types of light sources.



Figure 5. Albrecht Dürer, *Melencolia I* (New York, The Metropolitan Museum of Art, 1514).

Furtenbach's use of the word "melancholy" to characterize the privileged viewers of *Trauerspiel* offers an irresistible transition back to Benjamin, who points out that Lutheran doctrines prevalent in seventeenth-century Germany produced an overriding sense of melancholy in the ruling classes. Through the rejection of good works, he explains, human actions were deprived of value and, as a result, the great men of the Baroque period were left in a state of helpless self-absorption.³⁵ These were the privileged spectators who, since the early history of perspectival theater, sat in the center of the hall, the location from which all perspectival lines could be seen to converge at a single vanishing point on stage.³⁶ Just as the French philosopher Blaise Pascal famously called his king "a man full of miseries" who must be distracted from his melancholy, the writers and scenographers of the *Trauerspiel* conceived of their plays as distractions for their princes, whose despondency likewise plagued their souls.³⁷

Melancholy, in sum, is not only the state of mind but also the very image through which Benjamin asks his readers to understand the staging of the *Trauerspiel*. As he explains: "The images and figures presented in the German *Trauerspiel* are dedicated to Dürer's genius of winged melancholy. The intense life of its crude theater begins in the presence of this genius" (Fig. 5).³⁸ Hence, Albrecht Dürer's *Melencolia I* (1514) is one of the few images illustrating Benjamin's text. Erwin Panofsky and Fritz Saxl, whose analysis of Dürer's engraving is heavily cited in Benjamin's book, see here "Geometria surrendering to melancholy, or of Melancholy with a taste for geometry." They conclude that the image, "as in many other contemporary representations, is both the problem and a symbol of geometrically defined optics—more particularly, of perspective."³⁹ Such an interpretation not only corresponds to the link made by Furtenbach between melancholy viewers and perspectival effects on stage. It also amplifies the specific meaning of the objects that surround Dürer's figure. For Panofsky and Saxl, *Melencolia's* occupations are described by a list of tools; with her compasses she can measure, with her moulding plane she can build and with descriptive geometry she can produce optical illusions like perspective. But instead of an active role, she chooses to contemplate in silence. The princely spectator of the *Trauerspiel*, sitting in the center of the viewing audience, is likewise silent and motionless. His melancholic gaze is absorbed in a spectacle embellished by theatrical designs built only to distract him from his own misery. Yet he is never granted a final conclusion or a historical purpose. The allegories of the *Trauerspiel* saturate his mind with endless associations housed in a stage and enacted by scenery that decomposes into a ruinous chaos of fragments. Benjamin wrote that "the only pleasure the melancholic permits himself, and it is a powerful one, is allegory."⁴⁰ Neither the written allegories to be found in the *Trauerspiel* nor the stage upon which they were performed culminated in any sort of enlightenment for their viewer. Instead, they brought only incompleteness.

The *Trauerspiel*, in conclusion, is the materialization of the rhetoric of allegory: "[w]hatever it picks up, its Midas-touch turns into something endowed with significance."⁴¹ Yet however much one persists in seeking fulfilled meaning in its language or its scenography, concrete significance always slips away into another layer of association and theatrical distraction. Like *Melencolia's* listless gaze, those who sat before the scenic illusions and mechanics of the Baroque stage were left to contemplate an endless landscape of ruin, and therefore were given only temporary relief, as Furtenbach wrote, from their own "melancholy spirit." In this scheme of things, the theoretical frame of Benjamin's analysis sets the stage for the *Trauerspiel*, which can be understood as a moving three-dimensional image of the insistent yet hopeless search for meaning in history. That fruitless search, to Benjamin's mind, was so characteristic of the Baroque that to describe it he turned to the lamentation of one of the allegorical figures from Sigmund von Birken's *Die Fried-erfreute Teutonie* (1652): "Weeping we scattered the seed on the fallow ground and sadly we went away."⁴²

1. All citations are taken from Walter Benjamin, *The Origin of German Tragic Drama*, trans. John Osborne (London: Verso, 1998).
2. Susan Buck-Morss, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project* (Cambridge: The MIT Press, 1989), 164. Other examples include Samuel Weber, "Genealogy of Modernity: History, Myth and Allegory in Benjamin's Origin of the German Mourning Play," *Modern Languages Notes* 106.3 (April 1991): 465-500; Christine Buci-Glucksmann, *La raison baroque: De Baudelaire a Benjamin* (Paris: Galilée, 1984), and Barnard Cowen, "Walter Benjamin's Theory of Allegory," *New German Critique* 22 (Winter 1981): 109-122.
3. Buck-Morss, 178.
4. Weber, 473.
5. Benjamin, 45.
6. *Ibid.*, 47.
7. Gottfried Wilhelm Leibniz, *Discourse on Metaphysics, Correspondence with Arnauld, Monadology* (LaSalle: Open Court Publications, 1990), 253.
8. Benjamin, 48.
9. *Ibid.*, 62. Louis Marin, *Portrait of the King* (Minneapolis: University of Minnesota Press, 1988), 41-42, makes a similar observation about Jean-Baptiste Colbert's history of Louis XIV, which "will transform the paradigm 'History' into a particular narrative and, inversely, make of this narrative a universal model." Louis XIV makes history, but it is history that is made in what he does, and at the same time his historian, by writing what he does, writes what must be written."
10. The distinction Benjamin draws likely stems from his readings of Georg Lukacs whose essays in *Die Seele und die Formen* (1911) he often cites. For Lukacs, *Soul and Form*, trans. Anna Bostock (Cambridge: The MIT Press, 1974), 154, tragedy was "a revelation of God before the face of God. The god of nature and destiny, who is always speechless and always unredeemed, brings forth the voice of the god who slumbers inside man, the voice which in life, has fallen silent, the immanent god awakes the transcendental god into life."
11. Carl Schmitt, *Political Theology: Four Chapters on the Concept of Sovereignty*, trans. George Schwab (Cambridge: MIT Press, 1985), 5, cited in Benjamin, 65. Schmitt wrote that the "Sovereign is he who decides on the exception," rather than "a construct applied to any emergency decree or state siege." However, for Benjamin the Baroque sovereign held absolute power precisely because a "state of emergency" was always immanent.
12. Benjamin, 165. See Friedrich Creuzer, *Symbolik und Mythologie der alten Völker, besonders der Griechen* (1810; Hildesheim: Georg Olms Verlag, 1990). Creuzer, a philologist, was deeply influenced by the writings of Johann Joachim Winkelmann and his treatment of Greek sculpture as plastic symbol.
13. Howard Caygill, "The Significance of Allegory in the 'Ursprung des Deutschen Trauerspiels,'" in *1642: Literature and Power in the Seventeenth Century*, ed. Francis Barker, et al. (Colchester: University of Essex, 1981), 211, writes: "Although sharing a linguistic origin in overnaming, allegory and myth differ completely through their opposed reflexive attitudes: allegory represents itself as incomplete run; myth as an apparent unity." For a discussion of the Romantic preference for symbol over allegory, see Tzvetan Todorov, *Theories of the Symbol*, trans. Catherine Porter, (Ithaca: Cornell University Press, 1982), 198-221, and Paul de Man, "The Rhetoric of Temporality," in *Blindness and Insight: Essays in the Rhetoric of Contemporary Criticism* (Minneapolis: University of Minnesota Press, 1983), 187-228.
14. Cited in Benjamin, 93. See also Gerald Gillespie, ed., *German Theater Before 1750* (New York: Continuum, 1992), 139-214. It is interesting to note the classical precedent offered by Vitruvius, *Ten Books on Architecture*, trans. Ingrid Rowland (Cambridge: Cambridge University Press, 2001), 70. "Tragic sets are represented with columns and gables and statues and other trappings of royalty."
15. Benjamin, 92. Benjamin continues his argument about the spatial image in the theatrical setting by returning to Leibniz: "If history is secularized in the setting, this is an expression of the same metaphysical tendency which simultaneously led, in the exact sciences, to the infinitesimal method. In both cases chronological movement is grasped and analyzed as a spatial image. The image of the setting or, more precisely, of the court, becomes the key to historical understanding."
16. Benjamin, 166.
17. *Ibid.*, 175-176.
18. Carl Horst, *Barockprobleme* (Munich: L. Rentsch, 1912), 39-40, cited in Benjamin, 177.
19. *Ibid.*, 177-178.
20. It is interesting to note the example of Johann Georg Schöck's *Comöedia Vom Studenten Leben* (The Comedy of Student Life) from 1658, which was one of many plays of the period to have *tableaux vivants* composed of silent and motionless actors embodying the visual image of the words that had just been spoken. As many as three or four *tableaux* could be assembled on the stage portraying a visual version of the narrative in synchrony. See *German and Dutch Theater, 1600-1848*, ed. George W. Brandt (Cambridge: Cambridge University Press, 1993), 35.
21. See Kurt W. Forster, "Stagecraft and Statecraft: The Architectural Integration of Public Life and Theatrical Spectacle in Scamozzi's Theater at Sabbioneta," *Oppositions* 9 (Summer 1977): 63-87 and Christoph L. Frommel, "Raffaello e il teatro alla corte di Leone X," Marco Roser, "Sebastiano Serlio e il teatro del cinquecento," and Christof Thoenes, "Vignola e il teatro Farnese a Piacenza," all in *Bollettino del C.I.S.A. XVI* (1974), 173-187, 235-242, 243-256. For primary texts, see Bernard Hewitt, ed., *The Renaissance Stage: Documents of Serlio, Sabbattini and Furttenbach* (Coral Gables: University of Miami Press, 1958). See also Dunbar H. Ogden, ed., trans., *The Italian Baroque Stage: Documents by Giulio Troiti, Andrea Pozzo, Fernando Galli-Bibiena, Baldassare Orsini* (Berkeley: University of California Press, 1978).
22. Joseph Furttenbach, *Novae Itinerarium Italiae* (Hildesheim: Georg Olms Verlag, 1971), 25f.

- 23 *Ibid.*, 87-88.
- 24 For a full account of Furttenbach's stage in Ulm, see A. M. Nagler, "The Furttenbach Theater in Ulm," *The Theater Annual* 11(1953): 44-69.
- 25 An early reference to *periaktos* is given by Vitruvius, 69, who describes them as Greek mechanical innovations for the theater composed of rotating triangles decorated differently on two of their three sides. "when there is going to be a change of setting in a play, or the epiphany of a god in a clap of thunder, then these are rotated to change the appearance of the decoration on the exterior." Giacomo Barozzi da Vignola in *La due regole della prospettiva pratica* (Rome, 1583) mentions their use by Aristotile da Sangallo (1481-1551) in a production in Castro, Italy, in June 1543. Giorgio Vasari (1511-1574) and Bernardo Buontalenti (1536-1608) had also employed them. Giulio Parigi (?-1635), whom Furttenbach had met personally in his travels in Italy, was using them in his designs. Furttenbach calls the prisms *telari* (the plural form of *telaro*) or a "canvas covered frame." The Greek term *periaktos* is preferable because it refers to their mechanical rotation.
- 26 The measure on the drawing is in *Schuch* that can be roughly translated into feet (one *Schuch* equals 0.939 feet).
- 27 Hewitt, 204.
- 28 *Ibid.*, 227.
- 29 Aristotle, *Poetics*, trans. Malcolm Heath (New York: Penguin Books, 1996), 39.
- 30 Benjamin, 192.
- 31 *Ibid.*, 195.
- 32 *Ibid.*, 196.
- 33 Hewitt, 203.
- 34 *Ibid.*, 204.
- 35 Benjamin, 138.
- 36 See Forster, Furttenbach, in Hewitt, 216, wrote regarding seating arrangements: "In the space between the first benches and the front pit are placed sixteen well-appointed chairs for the most distinguished spectators with their wives, and for their youths."
- 37 In French, "un homme plein de misères;" Blaise Pascal, *Pensees* (Paris: Garnier, 1960), 114, cited by Benjamin, 143.
- 38 Benjamin, 158.
- 39 *Ibid.*, 328.
- 40 Benjamin, 185.
- 41 *Ibid.*, 229.
- 42 *Ibid.*, 233.

Frank Lloyd Wright and Michelangelo

HILARY BALLON

Henry-Russell Hitchcock issued a warning in 1948 at a symposium on the question: What is Happening to Modern Architecture? After commending Frank Lloyd Wright's "capacity for variety of expression," Hitchcock cautioned, "With Mr. Wright there is a danger, for he is obviously the Michelangelo of the twentieth century. Michelangelo was not good for his contemporaries, and, least of all, for his students." A year later, Philip Johnson echoed the view: "Frank Lloyd Wright is our Michelangelo."¹

The comparison may not seem like a putdown, but the parallel with Michelangelo was barbed and reflected ambivalence toward Wright at mid-century. As Neil Levine has shown, Hitchcock and Johnson, among other critics in the 1940s, intended the comparison to marginalize Wright. Even while conceding his genius, they isolated Wright from his time, denied his influence and, implicitly, questioned his place in history.² I would like to historicize the comparison in another way by asking if Wright thought of himself in relation to Michelangelo as did critics during his lifetime. How did the Renaissance master enter into Wright's thinking? Behind this question is the broader issue of Wright's connection to history—not only the history of modernism, but also the venerable humanist tradition of architecture that conceived of built form in relation to man and nature through the mediating language of geometry.

Such a line of inquiry is complicated by Wright's largely successful effort to locate himself outside of history. The irrelevance of history was a predicate of Wright's mission, which broke with the imitation of historical styles and envisioned an organic architecture responsive to specifically American conditions. Driven by an ambition to revolutionize architecture, Wright repudiated the value of the past even as he aspired to enter the pantheon of peerless "poet builders" and achieve immortal recognition. Wright found no fellowship among architects of the past; indeed, he rarely mentioned a pre-modern architect by name. The one figure to whom he generously paid tribute was Louis Sullivan, whose life ended in professional and personal collapse and who posed no risk to Wright's claims of originality. The kind of historic architecture Wright freely praised was vernacular architecture, "humble buildings . . . with which architects were seldom concerned,"³ or architecture without architects. "I find very annoying . . . his contempt . . . for all architecture that preceded him," Philip Johnson grumbled. "Was he born full-blown from the head of Zeus that he could be the only architect that ever lived or ever will?"⁴

In view of his nameless history of architecture, the rare occasions when Wright singled out an architect carry a special charge. One such occasion occurred in 1930 when Wright began a lecture by attacking Michelangelo and the dome of St. Peter's. The attack yielded one of the longest, if not the longest, passage about an old master in Wright's writings. My gloss on the text seeks to understand Wright's judgment of Michelangelo which, I submit, was not what it appeared to be, and to speculate about the way one titanic figure in the history of architecture grappled with another.

"Michelangelo built the first skyscraper I suppose, when he hurled the Pantheon on top of the Parthenon. The

Pope named it St. Peter's and the world called it a day, celebrating the great act ever since in the sincerest form of human flattery possible. As is well known, that form [the dome] is imitation."⁵ So begins "The Tyranny of the Skyscraper," the fifth in a series of six lectures that Wright delivered at Princeton University in May 1930 and published in 1931 as *Modern Architecture Being the Kahn Lectures for 1930*. The book is important for two reasons: it responded to critics who challenged Wright's credentials as a modern architect; and it made Wright aware of the role books might play in shaping his critical reception. *Modern Architecture* was Wright's first book and launched his career as a prolific author.⁶

The flamboyant opening quoted above encapsulates Wright's view of Renaissance architecture as barren imitation. Siding with Victor Hugo, John Ruskin, and Eugène Viollet-le-Duc, nineteenth-century romancers of medieval art, Wright posited the Renaissance not as rebirth but as decline, a compilation of dead styles: "The freedom from the yoke of authority which the Renaissance gave to men was seemingly a great gain; but it served only to bind them senseless to tradition and to mar the art of the Middle Ages past repair . . . [Architecture] will not live again until we break away entirely from adherence to the false ideals of the Renaissance."⁷ This passage comes from Wright's most extended commentary on the Renaissance, which was written in 1910 while he was living in Florence and discovering the art of the quattrocento and cinquecento. Wright did not pause to comment on individual artists in his sweeping dismissal, but the 1930 lecture has a different edge. Personifying the problem of the Renaissance, Wright cast Michelangelo as antihero.

Wright made Michelangelo's failings mirror those of modern architects. First, Wright accused him of thinking the biggest building is the best. After praising the low, "deep seated" domes of Persia, the flat vaults of ancient Rome, and even one big dome, Hagia Sophia, Wright projected the skyscraping ambitions of the 1920s onto the Renaissance architect: "Buonarroti got his dome up higher than all others—got it out of the building itself up onto stilts."⁸ Wright either did not remember or chose to ignore Giorgio Vasari whom he had read in 1910 while living in Florence and who explained that Michelangelo placed no premium on height. In fact, Michelangelo lowered the profile of St. Peter's compared to alternative schemes by designing a hemispherical dome.⁹

Michelangelo's second failing was his ignorance of structure. In Wright's paragone of the arts, architecture reigns supreme because it links form with structure and utility. Thus he condemned Michelangelo for approaching architecture as pure form-making: "Buonarroti, being a sculptor himself (he was painter also but, unluckily, painted pictures of sculpture), probably thought Architecture, too, ought to be Sculpture. So he made the grandest statue he could conceive out of Italian Renaissance Architecture."¹⁰ In short, Michelangelo designed a dome he could not support.

History relates . . . that a hurry-up call had to be sent in at the last moment for the blacksmith. A grand chain was needed, and needed in a hurry, too, to keep this monumental grandeur, up there where it was, long enough for it to do its deadly work. While they were getting this grand chain fastened around the haunches of the grand dome, in jeopardy on its stilts, our hero, the truly great sculptor, deeply, or rather highly, in trouble with Architecture, must have known some hours of anguish such as only Architects can ever know.¹¹

The facts did not interest Wright. Not only was the dome of St. Peter's built after Michelangelo's death and according to a revised design, but the story of emergency repair was pure fiction. True, metal reinforcements were used in the dome, but this was common building practice in arched construction. Vasari emphasized

Michelangelo's knowledge of vaulting and structural issues, even if he initially rejected the papal commission because "architecture was not his vocation."¹²

Wright regarded the dome of St. Peter's as an abstract idea, not a three-dimensional structure. It is uncertain if he had seen the church during his European sojourn in 1909-10. In any case, Wright was not prepared to recognize the creativity of Michelangelo's solution—the brilliance of the double-shell construction, the orchestration of forms into a coherent mass, the drama of the domed interior space. He only saw a "scrap-pile of reborn posts, pilasters and mouldings of the Graeco-Roman sort," a "magniloquent waste" (an inconsistent complaint from the designer of the Larkin Building's monumental atrium) and a form "empty of meaning or of any significance whatever except as the Pope's mitre has it."¹³ Michelangelo's dome set the terms of its own wanton imitation. "From general to particular the imitation proceeds," Wright explained. "The world saw it, accepted and adopted it as the great symbol of great Authority. And so it has flourished as this symbol ever since, not only in the great capitals of the great countries of the world, but, alas, in every division of this country, in every State, in every county, in every municipality thereof . . . Everywhere the symbol leaves us, for our authority, in debt to Michelangelo for life."¹⁴ One such dome he knew well; it dominated Madison, Wisconsin, not far from his Spring Green home.

However illogical it was to hold Michelangelo responsible for St. Peter's progeny, the accusation has the effect of magnifying his crime and achievement.

Domed or damned was and is the status of official buildings in all countries, especially in ours, as a consequence of the great Italian's impulsive indiscretion. But no other individual sculptor, painter, or architect, let us hope, may ever achieve such success again, or Architecture at the end of its resources may pass out in favor of something else.¹⁵

Thus concludes Wright's evaluation of Michelangelo, "the greatest artist who ever lived." Wright then turned to skyscrapers, the proper subject of the lecture, and paid tribute to Louis Sullivan's design of the Wainwright Building, "a greater achievement than the Papal Dome, I believe, because here was utility become beauty by sheer triumph of imaginative vision."¹⁶

Why did Wright demonize Michelangelo? Early drafts of "The Tyranny of the Skyscraper" omitted Michelangelo and the lecture began more logically with an anecdote about real estate values and congestion.¹⁷ Granted, Michelangelo's dome vividly illustrated what Wright opposed—the classical canon, historical styles and academic values which Princeton after all embodied. But arguably other local examples would have made these points more forcefully, such as a decorated skyscraper in Manhattan or a historicist building on the Princeton campus. Outside the lecture hall stood two masquerade Greek temples, Whig and Clio Halls (1823, remodeled 1893), and Ralph Adams Cram's brand-new Gothic chapel (1925-28).

Nothing in Wright's earlier work accounts for the ad hominem attack on Michelangelo in 1930. Wright had previously mentioned his name only in passing; half-formed references to "Angelo" are embedded in lists of names along with respectful references to his "magnificent pictorial sculptures" which Wright had "the privilege" of studying in Florence.¹⁸ Wright set small casts of the David in several Prairie houses. The insertion of Michelangelo in "The Tyranny of the Skyscraper" was unexpected, even digressive, and therefore meaningful. If Wright abandoned the impersonal terms of his standard historical critique, personalized the problem with classical architecture, and celebrated Michelangelo as antihero, it was because in 1930 he needed Michelangelo.

Wright projected his anxieties and ambitions onto the Renaissance master. Denouncing the fabled artist was in part a provocative way to start a speech, but more significantly, it positioned Wright in opposition to Michelangelo. The antagonistic pairing served to reaffirm Wright's achievement and relative importance in the history of architecture.

Princeton invited Wright to give the Kahn Lectures at a difficult moment in his career. Worse than unemployed, he was, in some quarters, deemed outdated, as good as dead. Wright was fighting for his place in history as a pioneer of modern architecture, a role Le Corbusier had usurped after the English translation of *Vers une architecture* was published in 1927 to critical acclaim. Hitchcock, for example, championed Le Corbusier as a "new Pioneer" and damned Wright as a "new traditionalist."¹⁹ Wright challenged the critic, belittling the redundancy of the term "new pioneer." "Why new?" Wright asked. "A pioneer is a pioneer, *n'est-ce pas*? However that may be found to be, all Monsieur Hitchcock has to say or can see done in "Towards a New Architecture" was here at home in our own country, at work with Mr. Sullivan in his field and with myself in mine more than 25 years ago." This is a reference to his advocacy of the machine, which went back to the turn of the century. Wright made the same point in a cooler tone in his own review of *Towards a New Architecture* published in 1928: "The fact that all Le Corbusier says or means was at home here in architecture in America in the work of Louis Sullivan and myself—more than 25 years ago and is fully on record in both building and writing here and abroad—has no meaning for him."²⁰

It should be noted that Le Corbusier celebrated Michelangelo in *Towards a New Architecture*: "Michelangelo is the man of the last thousand years as Phidias was the man of the thousand years before . . . The work of Michael Angelo is a *creation*, not a Renaissance, and overshadows the classical epochs." Le Corbusier included eight illustrations of St. Peter's and lavished praise on the church, including Michelangelo's idea of the dome. "To construct such a dome in stone was a *tour de force* that few men would have dared," but Le Corbusier correctly notes that Michelangelo only built the drum. "The rest fell into barbarian hands; all was spoilt. Mankind lost one of the highest works of human intelligence."²¹ Wright's shrill attack on Michelangelo in 1930 may have carried some displaced contempt for his modern champion, Le Corbusier.

Bristling at his perceived rearguard position, Wright used the Princeton lectures to redefine himself as a pioneer. *Modern Architecture*, the plain but pithy title of the book, staked out his ground. The Kahn Lectures were a rejoinder to Le Corbusier's *Towards a New Architecture*, a counter-manifesto to reclaim the mantle of modernism. Rather than inaugurate the Kahn Lectures with a fresh statement of his ideas, Wright shamelessly reread an old lecture, "The Art and Craft of the Machine" of 1903, to demonstrate that he had posed the problem of the machine aesthetic long before Le Corbusier, echoing the theme of Lewis Mumford's essay "Frank Lloyd Wright and the New Pioneers" of 1929. Mumford challenged Hitchcock's "underlying thesis of a cleavage in form between the generation of Wright and the generation of Le Corbusier and Oud" and argued that "the glorification of the machine by people who are just learning to use it, is 'modern' in Europe today precisely because it is forty years behind our American experience."²²

The issue of Wright's historical standing also explains the unusual illustration program of *Modern Architecture* (Fig. 1). Five of the six published drawings adopt a hard-edged, planar graphic style that Wright uniquely employed in 1929 to mimic the look of renderings by European modernists.²³ The drawings visually suggest that buildings from Wright's Oak Park years were forerunners of the International Style.

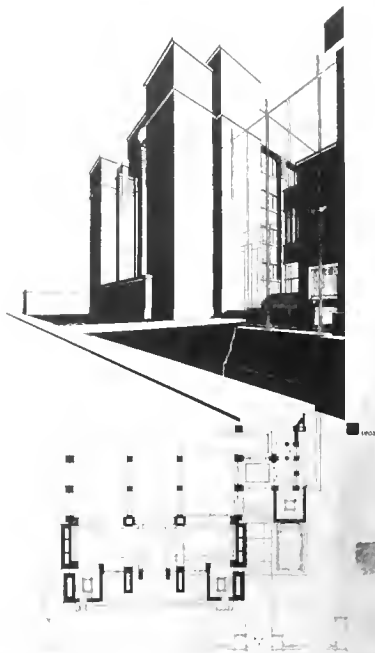


Figure 1. Frank Lloyd Wright, Larkin Building (1903), rendered by Heinrich Klumb, 1929-30. Frank Lloyd Wright Foundation 0403.002.



Figure 2. Frank Lloyd Wright, view of the Towers at St. Mark's in-the-Bouwerie, New York City, project. 1929. This rendering does not include the fourth tower proposed for a site across the street. Frank Lloyd Wright Foundation 2905.004

The complete argument of *Modern Architecture* need not be traced out here. Suffice it to say that Wright presented his ideas about the skyscraper, the modern building type par excellence, for the first time in his Princeton lecture. In a two-pronged argument, Wright mounted a social critique of the skyscraper as an instrument of real estate values and dehumanizing congestion, and an architectural critique of the standard system of steel-frame construction with masonry cladding in assorted historical styles. In Wright's analysis, the skyscraper is the modern analogue of Michelangelo's dome; both are structurally deficient, fixated on height, imitative in style, and widely imitated. Skyscrapers, "these Machine-made solutions with an ancient architectural look," Wright lamented, are "like the Buonarroti dome . . . foolishly imitated out on the western prairies and in the desolate mountain States."²⁴

* * *

While Wright did not discuss specific designs in the Kahn Lectures, "The Tyranny of the Skyscraper" was closely related to two contemporary projects that informed his discourse and translated his principles into designs. Both projects were designed for the Reverend William Norman Guthrie, rector of the church of St. Mark's in-the-Bouwerie in New York City and dated from 1928-29. The designs were linked to the skyscraper lecture by chronology, geography, and typology.

In 1929, Wright designed a series of four towers to flank St. Mark's church, on Second Avenue at 10th Street, and at the time of the Princeton lectures, was campaigning to get them built. Guthrie went to Princeton both to see the tower model in the exhibition of Wright's work accompanying the lectures and to confer with Princeton faculty about the architect's revolutionary idea for a cantilever tower. The St. Mark's project was one of Wright's most ambitious and inventive designs. In a radical rethinking of the high-rise building type, Wright proposed a cantilever structure in lieu of a skeletal frame, and duplex apartments with free-flowing, sunlit space enclosed by curtain walls of glass and copper rather than masonry cladding (Fig. 2). The towers were set in a park, one of several ways they reconnected the city dweller with nature. Although unmentioned in the Princeton lecture, the St. Mark's Towers gave concrete expression to Wright's ideas.²⁵

Wright understood the appeal of skyhigh verticality. Height was not a salient feature of the St. Mark's Towers; the tallest rose only eighteen stories, diminutive by New York standards. But his other design for Guthrie was a soaring "star tickler." In 1927, Guthrie asked Wright to illustrate an article on a "modern cathedral." Guthrie was leading a well-publicized, one-man crusade against St. John the Divine, the monumental building project that the Episcopal Bishop of New York William T. Manning was determined to complete. (He did not succeed; the cathedral remains unfinished to this day.) Guthrie objected to St. John the Divine on both artistic and religious grounds, and proposed a counter-project, modern in style, ecumenical in practice. On Easter Sunday 1928, in a sermon provocatively titled "The Resurrection of Our Dead Christianity, Clothed with the Body of an Impossible Cathedral," Guthrie laid out his vision of "a 1,500-foot star tickler, seating 25,000, thirteen-sided and built of steel and stained glass."²⁶

Granting Guthrie's request, Wright made three drawings of the theoretical project in 1928.²⁷ They are a tribute to his intimate friendship with Guthrie, their common ideals, and above all, Wright's interest in the architectural problem that was posed. Wright conceived a centralized structure based on a hexagonal plan with a soaring tee-pee-like enclosure supported by a tripod of steel girders (Fig. 3). Wright called it the Steel Cathedral: a historic building type reinvented with modern materials of steel and glass and a new structural system based on a tripod.

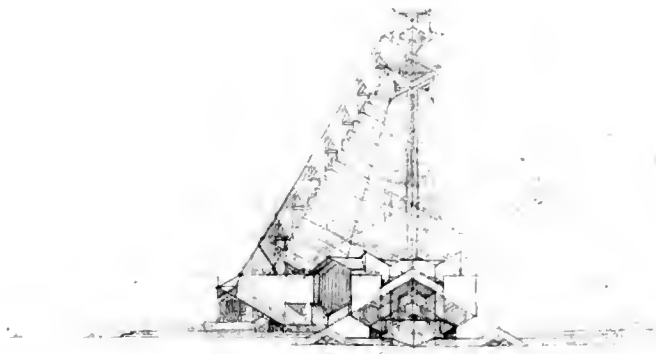


Figure 3. Frank Lloyd Wright, elevation of the Steel Cathedral, project, 1927. Frank Lloyd Wright Foundation 2602.003

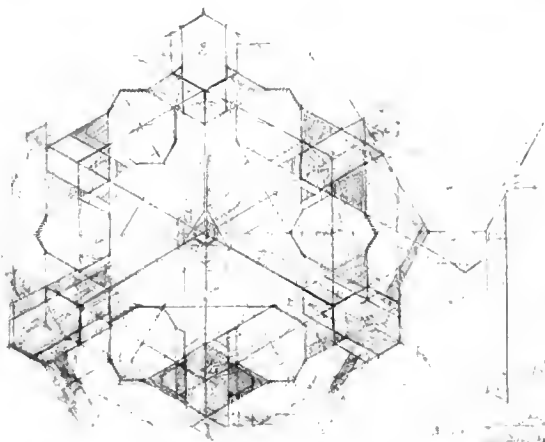


Figure 4. Frank Lloyd Wright, elevation of the Steel Cathedral, project, 1927. Frank Lloyd Wright Foundation 2602.002.

A canopy of glass is suspended from three structural girders, delineated in red on the plan, and an intermediate tripod of subordinate supports that Wright called pendants. The six lines radiating from the center of the plan are not axes; they reflect the plan of structural elements and demonstrate the integration of form and structure in Wright's approach to architecture.

The spire of the Steel Cathedral peaked at 2100 feet. At Unity Temple, Wright had rejected the image of a steeple church, its "finger" pointing to God, and instead designed a cubic meeting house. By contrast, the Steel Cathedral is a pointing finger of unprecedented height. The sketches of the Eiffel Tower and the Pyramid of Cheops appearing beside the Steel Cathedral on an elevation drawing emphasize the cathedral's height as well as the historic roots of the tripod structure.

An essay in centralized planning, the plan is Wright's first exploration of the hexagonal form (Fig. 4). A hexagon delimits the outer walls of the structure, which is raised on a rotated hexagonal podium. At the corners of the hexagon are diamond-shaped spaces, colored in yellow pencil. Between them are polygonal spaces, colored in white; generated from hexagons, they have exterior projections colored in blue that may indicate skylights. These peripheral spaces serve as chapels and form an outer ring of highly plastic, faceted volumes in contrast to the steep planes of the central pyramid. The chapels surround a central hexagonal space that steps down, like an amphitheater, to a fountain in the middle called the Fountain of the Elements. The placement of a fountain in the center and altars at the periphery, which suited the multi-denominational program of the Steel Cathedral, in effect resolved a problem that had vexed Renaissance architects: whether to place the main altar of centralized churches in the center or in the apse. Wright's design establishes an equilibrium between vertical and centrifugal forces, and plane and volume, with the geometric clarity of an ideal plan.

In terms of its scale, inventiveness, and architectural ambition, the Steel Cathedral begs comparison with archetypal religious buildings: Gothic cathedral and Renaissance domed church. The Gothic cathedral resonates in the name of Wright's design and in the circumstances of its commission, in opposition to the cathedral of St. John the Divine. Yet the design has stronger affinities to the tradition of centrally planned Renaissance churches.²⁸ Renaissance theorists regarded the circle as the ideal form, and its symbolic meaning devolved onto polygonal shapes derived from the circle. The hexagon came after the circle in the hierarchy of forms. Alberti stressed its affinities with nature, which "delights in the hexagon. For bees, hornets, and insects of every kind have learned to build the cells of their hives entirely out of hexagons." He also stressed its geometric properties: "Half the diameter of the circle will give the length of the sides of the hexagon;" other polygons are derived from it.²⁹ Serlio deemed the hexagon "close to perfection."³⁰ Although both treatises illustrated a hexagonal church plan, the form was more admired in theory than in practice. With his hexagonal scheme, Wright resurrected a form that the Renaissance had idealized but did not develop. The most widely adopted centralized plan during the Renaissance was the Greek cross, which reached its culminating expression in Michelangelo's design for St. Peter's. The Steel Cathedral is bound to St. Peter's as rival, heir and twin.

The Steel Cathedral is akin to Renaissance solutions governed by symbolic geometry. The geometric basis of the design is shown in diagrammatic form at the top of the plan and reinforced by the style of the drawing, unusual in Wright's oeuvre, with color coding to highlight the geometric pattern. The "spatial mathematics" and "organic geometry" that Rudolf Wittkower described in the centralized Renaissance church are also qualities of the Steel Cathedral.³¹ In the Renaissance world view, geometry carried symbolic meaning; the circle is ideal, and by extension, centralized plans partake of that meaning. In Wright's world view, geometry also carried symbolic

and spiritual resonance: "Geometric shapes through human sensibility have thus acquired to some extent human significance as, say, the cube or square, integrity; the circle or sphere, infinity; the straight line, rectitude . . . ; the triangle . . . aspiration."³² In Renaissance architecture, the centralized church mediated between God and man, between macrocosm and microcosm. For Wright, nature stood in for God, and geometric forms mediated between man and nature. A work of architecture is "the highest, most subjective, conventionalization of Nature known to man, and at the same time it must be organically true to Nature when it is really a work of Art."³³ When Wright wrote these words in 1900, he used the example of the lotus, which Egyptians turned into a column capital. Thirty years later, Wright expressed this concept in two recent designs that embody his idea of architecture as an abstracted expression of nature: St. Mark's Towers, whose cantilever structure he related to a tree; and the Steel Cathedral, where the basic hexagonal form and central placement of the Fountain of the Elements, among other features, inscribe the idea of Nature.

Although Wright condemned the Renaissance, he was its theoretical heir in an important respect. The link emerges in the close connection he drew between music and architecture, and his concept of geometry and nature. Whether Wright knew Michelangelo's plan of St. Peter's is beside the point; the Steel Cathedral and Michelangelo's Greek-cross scheme bear a conceptual rather than a formal similarity. The two designs are quintessential essays in centralized planning and stem from a common view of geometry as the symbolic language of architecture. Wright would have been loath to acknowledge the connection; nevertheless, the Steel Cathedral and St. Peter's were companionate designs, rooted in a common tradition of humanist architecture. As much as any design in his oeuvre, the Steel Cathedral expresses the idea of architecture as "an image or mirror of a pre-ordained mathematical harmony of the Universe," as Wittkower discerned in centrally planned Renaissance churches.³⁴

In 1930, with his historical reputation on the line and his creativity resurgent, Wright issued a challenge in "The Tyranny of the Skyscraper," not just to the "new pioneers" but also to the "the greatest artist who ever lived." Wright had just conceived two brave and wholly original ideas: one for a cantilevered tower, the other for a skyscraping tripod truss structure, both of which were implicitly drawn into the contest with Michelangelo and his triumphant dome. Wright was awestruck by Michelangelo's historical impact. He tried to imagine Buonarroti's reaction to the Grand Canyon, wondered what he would think of America's "dome-istic" imitations, and stressed Michelangelo's unparalleled influence. Whereas Hitchcock saw Michelangelo as lacking influence and standing outside history, Wright conjured the reverse: "Probably every other sculptor who ever lived would like to have done or to do the thing that Michelangelo did."³⁵

Michelangelo was revered by Wright's mentors: Dankmar Adler regarded him as a divine artificer; he was Sullivan's "Super-Man," "first great Adventurer," "first mighty Craftsman," and Sullivan makes clear that he identified with the Renaissance master.³⁶ In a transfiguration of their hero worship, Wright offered up Michelangelo as antitype in the Princeton lecture of 1930 because he experienced a strong connection—a combination of admiration, envy and contempt. At this creative turning point in his career, Wright measured his achievement against "the greatest artist who ever lived" while tapping into the humanist tradition of architecture with renewed force, clarity and invention.

This essay is offered in tribute to Henry Millon, whose combination of exacting scholarship, depth of knowledge, and insight into the design process and architectural drawing has illuminated so many aspects of the history of architecture, including Michelangelo at St. Peter's.

1. Cited by Neil Levine, *The Architecture of Frank Lloyd Wright* (Princeton, 1996), 423.
2. Levine, 423.
3. Frank Lloyd Wright, "Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright" (1910), in *Frank Lloyd Wright Collected Writings*, ed. by Bruce Brooks Pfeiffer (New York, 1992), vol. 1, 103.
4. Levine, 424.
5. Frank Lloyd Wright, *Modern Architecture Being the Kahn Lectures for 1930* (1931, Carbondale, Illinois, 1987), 83.
6. *The Japanese Print* appeared in 1912, but was pamphlet-length. *Modern Architecture* is discussed more fully in Hilary Ballon, *Frank Lloyd Wright's Towers* (W.W. Norton, in press).
7. "Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright" (1910), in *Collected Writings*, vol. 1, 105.
8. *Modern Architecture*, 84.
9. Wright described his reading program during his six-month residency in Florence (Mar.-Aug. 1910) in a letter to Charles Ashbee, dated July 8, 1910. It is cited by Anthony Alofsin, *Frank Lloyd Wright: The Lost Years* (Chicago, 1993), 53, in a penetrating analysis of the Florentine sojourn.
10. *Modern Architecture*, 83.
11. *Ibid.*, 84.
12. Giorgio Vasari, *Lives of the Artists*, trans. by George Bull (New York, 1965), vol. 1, 385.
13. *Modern Architecture*, 83-84.
14. *Ibid.*, 83.
15. *Ibid.*, 84.
16. *Ibid.*, 85.
17. There are six drafts of "The Tyranny of the Skyscraper," each one rigorously edited by Wright, see Frank Lloyd Wright Foundation Archives, Tahesin West, Manuscript file 2401.066.
18. For early references to Michelangelo, see "Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright" (1910), and "The Japanese Print" (1912), in *Collected Writings*, vol. 1, 103, 122.
19. For his view of Wright as a "new traditionalist," see Henry-Russell Hitchcock Jr., "Modern Architecture," *Architectural Record* 64 (Apr.-May 1928), 337-349, 453-460; Hitchcock, *Frank Lloyd Wright* (Paris, 1928), and Hitchcock, *Modern Architecture: Romanticism and Reintegration* (New York, 1929).
20. Frank Lloyd Wright, "In the Cause of Architecture, Purely Personal" (unpublished, 1928), and "Toward a New Architecture" (1928) in *Collected Writings*, vol. 1, 255, 317. Wright's review of Le Corbusier's book originally appeared in an unexpected and obscure outlet: *World Unity*, the journal of the Baha'i faith. The editor Horace Holley was a friend of Wright's and a vestryman at the New York City church of St. Mark's in-the-Bowwerie where Wright's design for a group of towers was under consideration. Wright was counting on Holley to champion the project.
21. Le Corbusier, *Towards a New Architecture*, trans. by Frederick Etchells (1927, New York, 1960), 156, 158.
22. Lewis Mumford, "Frank Lloyd Wright and the New Pioneers," *Architectural Record* 65 (Apr. 1929), 414-416; reprinted in H. Allen Brooks, ed., *Writings on Wright* (Cambridge, Mass., 1981), 149-154. Mumford restated his position in a review of Hitchcock's *Modern Architecture* in *The New Republic* (Mar. 19, 1930), 131-32. Ironically, Princeton originally chose a "new pioneer," J.J.P. Oud, to give the Kahn Lectures. Unbeknownst to Wright, he was the backup selection when Oud withdrew due to illness. On Oud's selection, see Department of Rare Books and Special Collections, Princeton University, "Report of the School of Architecture for the Year 1929-30," 17.
23. The drawings were rendered by Heinrich Klumb and Takehito Okami on roll-up window shades. They were displayed in the traveling exhibition of Wright's work that opened at Princeton University at the time of the Kahn Lectures. On the drawings, see Donald Leslie Johnson, *Frank Lloyd Wright versus America: The 1930s* (Cambridge, Mass., 1990), 101.
24. *Modern Architecture*, 87.
25. For an in-depth analysis of the St. Mark's Towers, see Ballon, *Frank Lloyd Wright's Towers*.
26. Lucien Arthur Jones, "Super-Cathedral, 1,500 Feet High, Seating 25,000, Is Urged by Guthrie," *San Francisco Examiner* (Apr. 13, 1925), 1; cited by Richard Joneas, "Buildings for Worship," *Frank Lloyd Wright and the Living City*, ed. by David G. De Long (Milan, 1998), 103. For further analysis of the Steel Cathedral, see Ballon, *Frank Lloyd Wright's Towers*.
27. The drawings were modified at a later point to serve as the Broadacres Cathedral and to accommodate a commercial arts festival; see Frank Lloyd Wright Foundation Archives, Tahesin West, Manuscript file 2602.001-003.
28. George Hersey links the Steel Cathedral plan with Borromini's dome of S. Ivo alla Sapienza, a comparison that requires him to ignore the outer ring of chapels as well as the hexagonal basis of Wright's design. S. Ivo is based on two superimposed equilateral triangles. See Hersey, *Architecture and Geometry in the Age of the Baroque* (Chicago, 2000), 208-209.
29. Leon Battista Alberti, *On the Art of Building in Ten Books*, trans. by Joseph Rykwert et al. (Cambridge, Mass., 1988), 196.
30. Sebastiano Serlio, *On Architecture*, trans. by Vaughan Hart and Peter Hicks (New Haven, 1996), 406.
31. Rudolf Wittkower, "The Centrally Planned Church and the Renaissance," *Architectural Principles in the Age of Humanism* (New York, 1971), 1-32.
32. Frank Lloyd Wright, "An Autobiography" (1932), in *Collected Writings*, vol. 2, 213.
33. Frank Lloyd Wright, "A Philosophy of Fine Art" (1900), in *Collected Writings*, vol. 1, 43.

34 Wittkower, ii

35 *Modern Architecture*, 83

36 On the responses of Adler and Sullivan to Michelangelo, see Dankmar Adler, "The Influence of Steel Construction and Plate Glass Upon Styles," *The Proceedings of the Thirtieth Annual Convention of the American Institute of Architects* (1896); reprinted as "Function and Environment," in *Roots of Contemporary American Architecture*, ed. by Lewis Mumford (New York, 1972), 247-248, and Louis Sullivan, *The Autobiography of an Idea* (1924, New York, 1956), 234-236, 287

Why I Love Paul Hofer

ALDO ROSSI

(INTRODUCED BY MARK JARZOMBEC AND TRANSLATED BY DAVID FRIEDMAN)

Introduction

It is a frequent lament that contemporary architectural students are increasingly untrained in the intense observation of past architectural accomplishments. It has also been pointed out how insular Renaissance and Baroque scholarship has become in the last decade. There are fewer and fewer positions available in these fields in schools of architecture. It would be beyond the scope of this set of essays dedicated to Professor Henry Millon, himself an architect and scholar, to delve into this problem in detail. Nonetheless, I thought it would be useful to recall that those who had the privilege of studying with Millon know that he had a passionate interest in drawings and a gimlet eye when it came to observing them.

Inspired by that memory, I would like to present at least one other example of a fruitful exchange between the historian and the architect, namely that between Paul Hofer and Aldo Rossi. Hofer, a man with many competencies and professor of architectural history at the Eidgenössische Technische Hochschule in Zurich, dedicated a good portion of his scholarly career to investigating the Baroque, working in particular on the Sicilian city of Noto. Hofer was, however, also known for his drawings, which formed the centerpieces of his unforgettable lectures. Among the numerous students who attended these lectures was the young Rossi, who came to be deeply influenced not only by Hofer's urban theories, but also by his drawing style—ink on paper with loose handwritten notes and commentaries filling up the margins (Figs. 1, 2). Since Rossi's drawings are well-known and have been widely published, we are publishing two drawings by Hofer and the translation of a short piece that Rossi wrote in 1991 entitled "Perché amo Paul Hofer," which first appeared in André Corboz, ed., *Die Stadt mit Eigenschaften* (Zurich: GTA, 1991), 13.

DIE AMATEURKIRCHEN
(I)

PALERMO
S.TERESA
Piazza della
Kalsa

9.IX.1969.

GAMATO
1686-1706

Vgl. ATANIA
CRONACHE
Stadtbuch von
Palermo, IIA LII
Gottlieb Jenzel
1969 / ER 32
15.10.69
eng.

Vgl. FRONT MAD. DELLA
PIETA' FRIEDRICH A.M.
165 (1628-1664)

Gigantes-Tym-
panon mit Stat.,
Voluten und Giebel
exedra mit Säulen
Säule unter Doppelpil.
Voluten rechts viel
musikalisch

↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑
PiaZZA DELLA KALSA
pp pL S S S S S L P P
(Musikalisch)

Figure 1. Paul Hofer, "Palermo, S. Teresa, Piazza della Kalsa" (1969).

Why I love Paul Hofer

I love him, yet what I write here is not a simple homage. I knew his work before meeting him and it changed the kind of architect I was to become. Hofer was able to give visual form to the results of scholarship in ways that were artistic and creative. He did the same thing for the history of architecture that Karl Kerényi did for the study of mythology: by salvaging a lost world for a contemporary audience he stimulated the development of modern culture.

I prefer to say these things rather than to boast about his friendship. I believe he befriended me because he recognized how much I admired him, but perhaps it was something more.

I could write about a conversation we had one morning in Bern, or about another that took place while we were doing research in the city of Solothurn, or about others concerning the places in Switzerland that belonged to our friendship.

But let others write about these memories, and others still about his work as an historian. (We await the publication of his complete work, even if it must appear in fragmentary form.) I've become ever more exclusively a designer and that, too, is a reflection of his influence. I have a drawing that he made of the Gallaretese project in Milan. It's a very personal interpretation and it shows how fully he identified with my vision for architecture.

So I dedicate to him this first design (published with the original version of this text) for a large commercial complex that I'm building in Milan. It's on the site of a big factory and I want to preserve some of the existing structures. Warehouses, smoke stacks, water towers embody the spirit of this architecture. They are only fragments but they are enough to generate the new project. Paul Hofer recognized a part of the city in every architecture.

My dear master, I dedicate these words and this drawing to you. I hope to meet you again and pray that you haven't forgotten that Milanese student, a little eccentric (*bizzarro*), but very much interested in you and in your work.

—Aldo Rossi

Plates



Plate 1



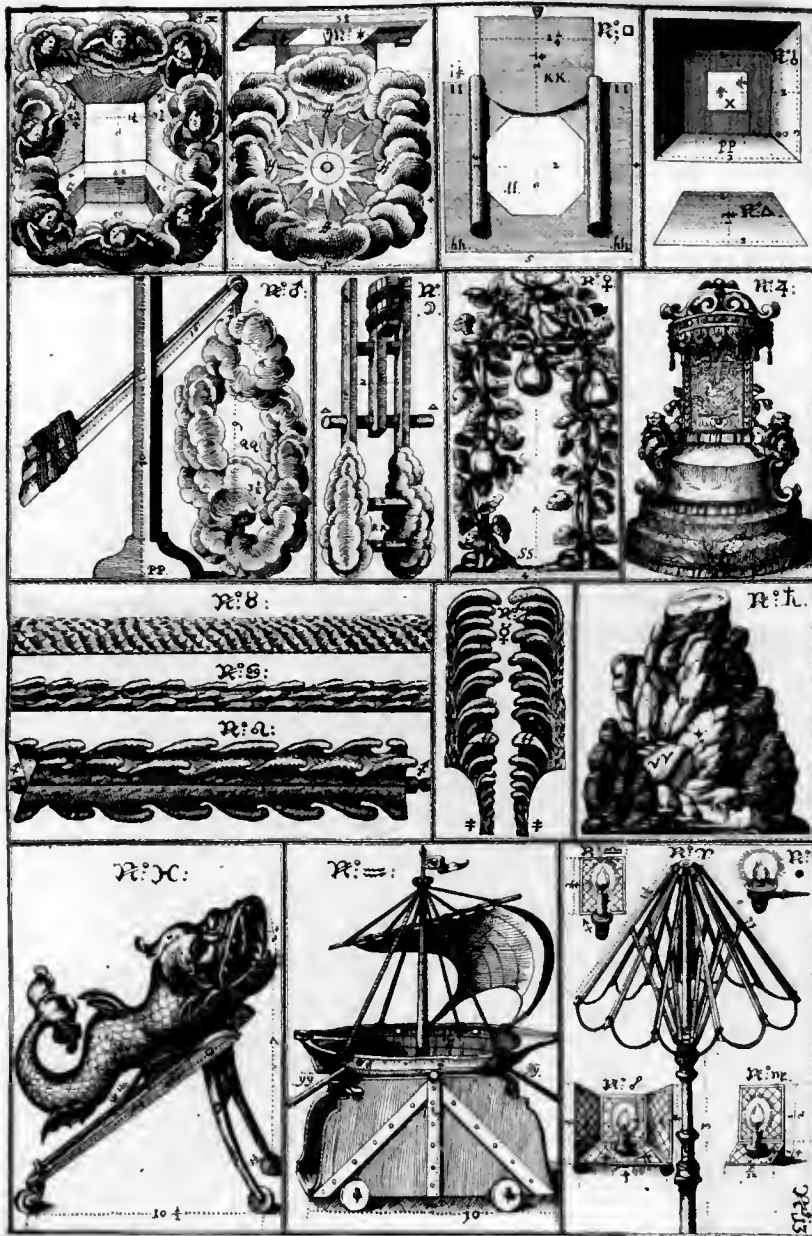


Plate 4

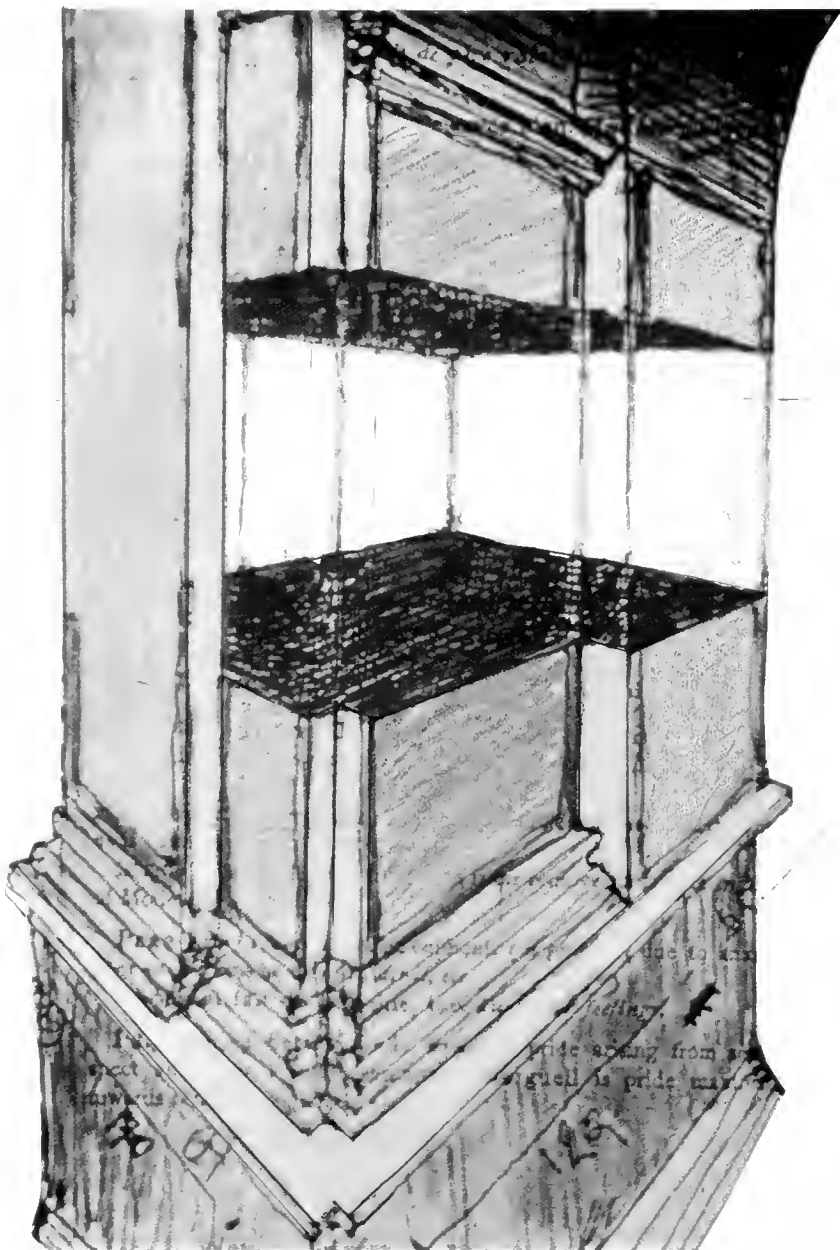
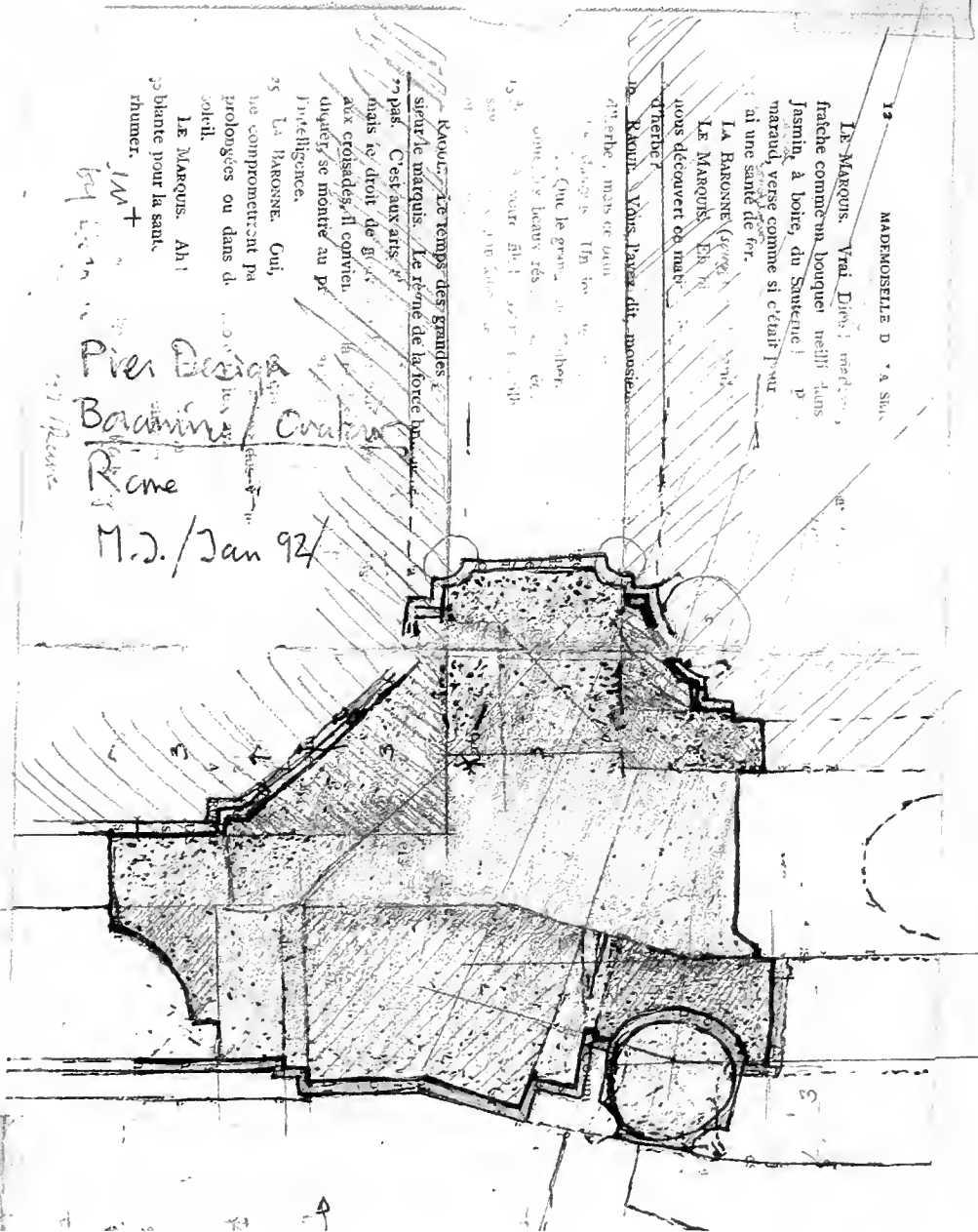


Plate 5



12

MADMOISELLE D. A. SUE

LE MARQUIS. Vrai Dieu! m'effraye
franche comme un bouquet! neffraye dans
Jasmin, à boîte, du Sauterie! p
maraud, verse comme si c'était l'air
ai une santé de fer.

LE BARONNE. En
Le MARQUIS. En
vous découvrez ce mat
d'herbe?

LE MARQUIS. Vous l'avez dit, monseigneur
d'herbe, mais ce n'est
d'herbe, mais ce n'est
d'herbe, mais ce n'est

LE MARQUIS. Il n'y a
que le grand, le grand
comme le grand, le grand
comme le grand, le grand

LE MARQUIS. Il n'y a
que le grand, le grand
comme le grand, le grand
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comme le grand, le grand
comme le grand, le grand

LE MARQUIS. Il n'y a
que le grand, le grand
comme le grand, le grand
comme le grand, le grand

LE MARQUIS. Il n'y a
que le grand, le grand
comme le grand, le grand
comme le grand, le grand

LE MARQUIS. Il n'y a
que le grand, le grand
comme le grand, le grand
comme le grand, le grand

Pier Esquis
Baronine / Coustume
Rome
M.D. / Jan 92/

Plate 6



Plate 7

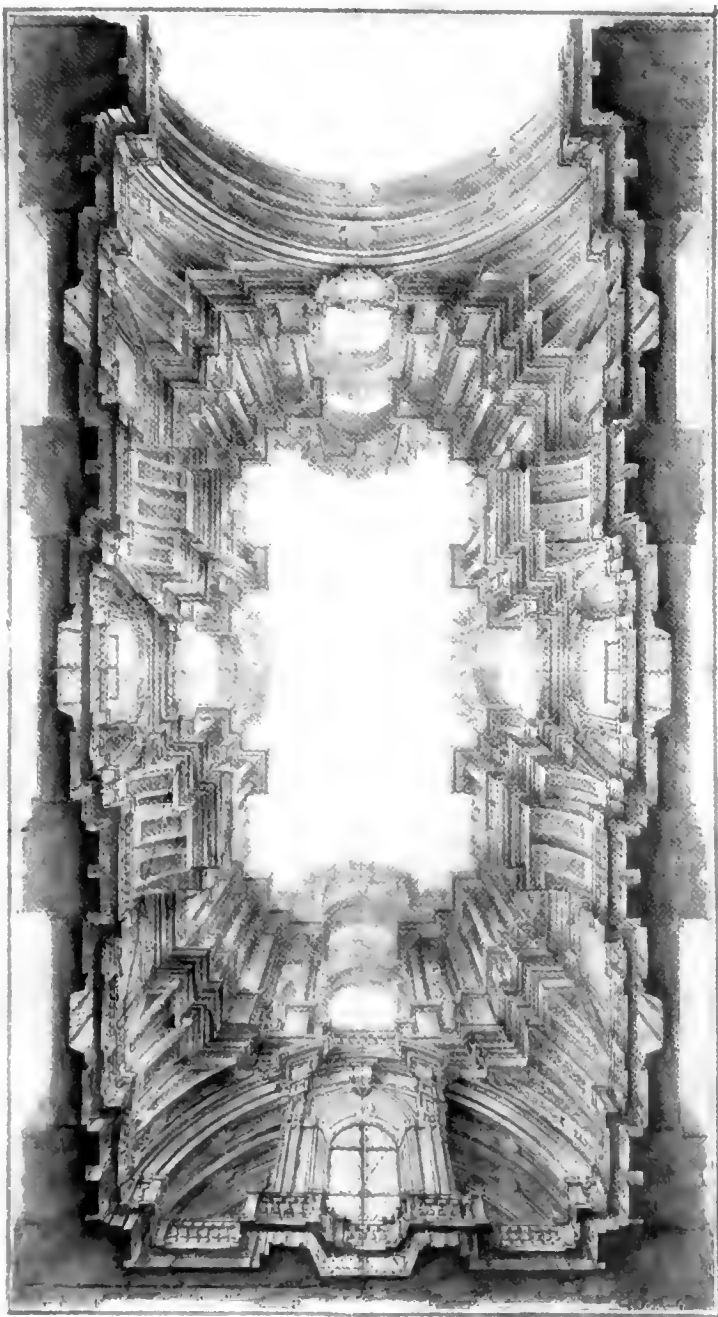


Plate 8

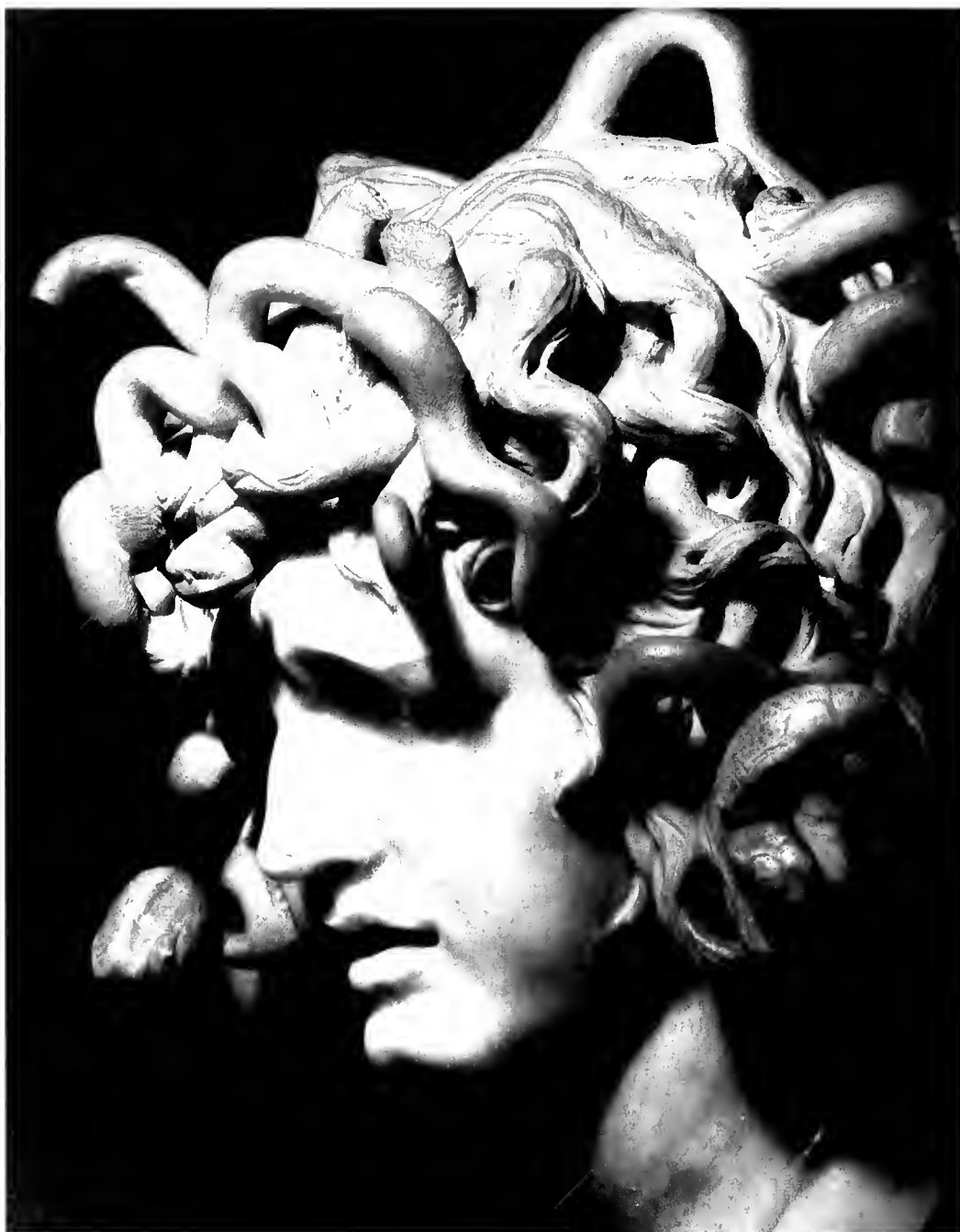


Plate 9



Plate 10

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Sarah McPhee, an associate professor in the Department of Art History at Emory University, has recently published a book on Bernini's bell towers for St. Peter's.

Erika Naginski, an assistant professor in MIT's Department of Architecture, has just finished a study of sculpture during the Enlightenment.

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The late **Aldo Rossi**, Pritzker Architecture Prize Laureate, was an internationally renowned architect, artist, theorist, author, and teacher.

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Gary van Zante, architecture and design curator at the MIT Museum, has a forthcoming book on Theodore Lilienthal's 1867 photographs of New Orleans.

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